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## THE OBLIGATIONS OF MEDICINE IN RELATION TO GENERAL EDUCATION

PRESIDENTIAL ADDRESS *


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In the old Navy a midshipman was defined as a person with no rights and few privileges. Many societies and associations have a feeling akin to this about their president and regard him as a sort of lay figure on which to drape honors but from whom no serious participation in affairs is expected. It is no empty honor and no small privilege to be permitted to address the American Medical Association. I hope no one will think that I am exceeding my rights or straining my privileges in taking for discussion a subject which has been largely entrusted, during the Association's long campaign for the education of the public and the improvement of our medical schools, to members having special knowledge and special ability. It is my good fortune to be granted the floor here this evening, and I firmly believe that, while leadership belongs to the few who enjoy peculiar qualifications, intelligent cooperation is the obligation of all; that if the measures concerted in committees are to succeed they must have behind them the force of general approval and of lively interest in proportion to their importance. I therefore conceive that it is my part to foster by every means in my power a general participation in the educational program which has characterized this Association since it incipience.

It is glorious to think that the practical, material benefit which we anticipate from this meeting is only secondarily for ourselves. We want to be more capable in the service we render to our patients rather than to increase either fame or fortune. This is very well as far as it goes, but it is not enough. We must realize afresh at each annual convocation that before being members of the Association we are physicians, before physicians citizens, before citizens men. So far as we neglect the functions of the citizen or forget the obligations created by man's social environment and repudiate every duty not directly connected with private practice, we are recreant to a high trust.

In the recent war the medical men of America laid aside their practices at no small sacrifice and with no small risk to their future prospects to play the patriot; and so did lawyers, business men, teachers in colleges, scientific investigators, and so on. It was a noble stand to take, but the glory of this spontaneous uncalculating action will be considerably dimmed if, now that the threat of invasion, the foreign menace to our institutions has passed, we relapse into that narrow life pursued by so many who tacitly maintain that because they sustain important private relations to the sick they are absolved from participation in the struggle for the betterment of town, city, county, state and country, and of the world itself.

In this matter of responsibility outside of mere professional life we all need education, and what more fitting opportunity than this to solicit from you all a holier dedication to your patients' interests by thinking of what they need to be told, how they should be guided and how helped when they are not actually suffering from bodily ailments? When we do this we are at the threshold of social and preventive medicine —a medicine of education as well as of prescribing and operating.

### EDUCATION OF THE PUBLIC IN HEALTH MATTERS

The education of the general public in matters relating to health has not been entirely overlooked in the United States. A good deal has been done, especially in the last few years, but the sum total is small indeed when considered, on the one hand, in relation to the importance of the subject, and, on the other, to our great territory, huge population, vast resources, multiplied and highly productive forms of energy and our general advance along all lines. Certainly in many details of health regulation and health promotion we are behind the older nations of Europe, relatively if not absolutely. True, we have an infinity of things to enrich and brighten life which they lack, but these have resulted from a desire for comfort and the reduction of manual labor, and have not grown out of the pursuit of health, which, as a matter of fact, is not always enhanced but may be seriously jeopardized by ease and luxury.

After the dissipation of life incident to all great wars, men invariably turn to the importance of saving life and prolonging it, and health-giving measures excite at least a temporary interest. We shall therefore miss a great opportunity if we do not at this time use every endeavor to press home the great self-evident truths about health and long life as they affect national prosperity and race permanence.

Is there any one who doubts for a moment that the physical integrity of its citizens and their ability to deploy all the energy which unvitiated, untainted nature can generate are of the first importance for the onward and upward progress of this republic? Is the health of the nation a national concern? If so, then the nation as such should go into the matter with the same busi-

* President's address before the American Medical Association at the Seventy-First Annual Session, New Orleans, April, 1920.

ness acumen, on the same scale and with the same continuity of effort manifested in any other vital public concern. There is certainly no occasion to advance arguments on this score. No educated and thoughtful man can deny that physical stamina plays an enormous part in the prowess and permanence of peoples. We see families, tribes and races spring up from a mysterious, nebulous origin that baffles alike the research of the philologist and ethnologist, reach a climax of development and power, and then decline. These fluctuations of fortune are genetically connected with physical conditions such as geographic location and its corollaries climate, food supply, parasitic infections, local foci of disease and perhaps the necessity for more or less consanguineous marriages. As a result of local conditions unfavorable to the propagation and perpetuation of a race, religious and social usages are evolved which form a sort of counterpart to those protective physical processes seen everywhere in nature.

One of the most remarkable and anomalous incidents of history is the way the Hebrews have preserved their race entity and characteristics though deprived for two thousand years of a local habitation and though prior to their final dispersion they had been for centuries the objects of foreign domination—enslaved, driven out, carried into captivity. While today the Jews may enjoy the benefits of other civilizations than their own, it is generally recognized that in the earlier periods of their history their cohesion and their national achievements were largely the result of a unique and remarkably extensive hygienic and sanitary system far beyond anything employed by any other race. Their peculiar observances were not due to the influence of physicians, to whom there is scant and none too favorable reference in the Old Testament, but embodied the wisdom of Egypt and Mesopotamia and had behind them the force of civic and religious obligation and were administered by the priestly caste. Carl Sudhoff of Leipzig, the modern authority on medical history, has characterized the Hebrew Sabbath day of rest and the direct prophylaxis of disease as the two greatest hygienic thoughts of mankind.

### THE STATE'S NEED OF STURDY MEN

Can we pretend for a moment that the stability of Rome through twelve centuries of existence under kingly, republican and imperial rule, vexed by enemies within and without, was not dependent in a large degree on the extensive municipal provisions for health, which included an ample and excellent water supply, adequate drainage, extramural sepulture, and on the universal respect for physical prowess and physical hardihood inculcated by kings and consuls and not by the physicians, who to their lasting shame cared little for these things? We know how much the national life of Sparta owed to its rigid discipline and the paramount emphasis laid on bodily vigor, and how Athens all through its glorious period of intellectual development continued to cultivate physical perfection, not only because the artistic sense of the Greeks was gratified by beauty of form and symmetry of proportion but also because the old Homeric and pre-Homeric belief still survived that the deformed or depraved physique was to some extent an index of mental abnormality and moral blemish. In all this we are not up to the level of the Greeks of 500 years before Christ; for while science has gone far toward demonstrating the extent to which conduct and happiness depend on conformation and structure, we do practically nothing about it.

To my mind the most paradoxical feature of our modern civilization is the indifference of a comparatively educated and well informed world to the human body, which is the most marvelous of nature's products and has been styled by Sir James Paget "the most complex mass of matter in the known world."

We are astonished when we reflect that man inhabited the earth and examined himself and his surroundings for thousands of years without discovering what seems to us so evident a thing as the circulation of the blood. But is it not extremely likely that future ages will comment with astonishment and scorn on our stupidity in not carrying on as a nation a systematic effort to improve physical development and to further physical conservation; in allowing our children to grow up in utter ignorance of their bodies and, if ignorant, necessarily neglectful of them?

I submit that the nation's health is a national concern; that it underlies all industrial and business effort; that it is the fundamental element in successful competition with rival nations, whether under the slow and prolonged strain of commercial contests or the sudden and imperious demands of armed conflict; that if we look ahead, as true love of country compels us to do, and estimate the trend of future events, we must acknowledge that physical vigor will, in a large measure, decide our complete development and permanent possession of the land which our forefathers won for us not only on the fields of battle but in strenuous struggles against the elements; in the mighty labor of felling forests, tilling the soil and developing the resources hidden in the heart of the earth.

I am very far from undervaluing the work of the many agencies already engaged in indoctrinating the people in the fundamentals of health; but it is undeniable that so far their efforts have been inadequate to the magnitude of the task as I conceive it. The campaign must be one of concerted measures, nation-wide in extent and unflaggingly prosecuted.

### TEACHING OF HYGIENE IN PRIMARY SCHOOLS

I think that up to the present we have been guilty of a cardinal error in seeking wholly to proselyte the adult. Our preaching has been to people enslaved by the chains of lifelong habits. We have advised men with damaged hearts and kidneys and blood vessels to eat and drink and smoke less; to take moderate exercise; to learn to relax and play; to avoid undue excitement so that they might spin out the thread of life by a few years. We have appealed to high school, college and university students to abjure tobacco and alcohol; have held up personal purity as something of supreme importance, given instruction about venereal diseases, instituted courses in personal hygiene that perhaps conveyed to them for the first time in their lives some rudimentary knowledge of their own bodies. In all this we have overlooked two things. The man of middle life cannot make his depraved body over and replace worn out organs. If he stops work he dies for lack of occupation. If he gives up some habit that has become an integral part of his being, he may suffer devitalizing mental and bodily reactions not unlike those of the opium eater deprived of his drug. The best he can do, and what he is most likely to do under the influence of this health propaganda, is to plan to

bring up his children on the lines suggested. This would seem at first blush to be a very definite and valuable result; but whoever has attempted in his own family to reform modes of living, whether in the matter of food, dress, ornaments, study or pastime, knows how difficult, how nearly impossible it is to accomplish any radical change which differentiates wife and children from the bulk of their associates and makes them the objects of comment. Young people are more gregarious than adults, and far more bound by the ethics and standards and practice of their kind.

In the second place we forget the pitiless logic of youth. The lad or maiden who has for five, ten or fifteen years been goaded to study grammar, mathematics, languages; on whom there has been exerted insistent pressure to acquire mental attainments, cannot easily be persuaded later on that a subject kept in the background or displaced in favor of something else is the one of paramount importance. We cannot expect the young to believe that hygiene, physiology and health are matters of prime importance; that their parents and teachers really esteem them such, when everything else has come ahead of these subjects. The children are right, because we do put first what we esteem to be first. They infallibly consider that health teachers are mere faddists and reformers, and that it is more vital to the gratification of their ambitions and their success in life to know the length of the Amazon and to be able to give the order in which different politicians have occupied the White House than to understand the oxygenation of the blood or the nature of a reflex movement.

I propose that we abandon at once all half measures, get away from routine, conventional methods and embark on something new, radical, revolutionary, but something at the same time perfectly feasible, if undertaken on a scale fully commensurate with the colossal results desired. We recognize that the nation must be composed of individuals having a maximum of physical strength and we believe that these individuals must be carefully educated; that is to say, mentally and morally developed, if we are to be something more than the world's bully, and if America has a destiny and a mission related to the world's ultimate amelioration. But just as our race as a whole must have physical integrity for survival in the struggle with its rivals, so the individual must have health and strength as a groundwork for all mental development.

### SOUND HEALTH THE FIRST REQUISITE OF A LIBERAL EDUCATION

Let us throw out as irrelevant and misleading the occasional benefits conferred on humanity by the prodigious accomplishments of some individual whose genius bordered on insanity; let us forget that here and there an invalid, a neurasthenic, a neurotic has enriched the intellectual life of the world or done some epoch-making thing. Such facts do not invalidate the general proposition that sound health is the first prerequisite of a liberal and rounded education, and let us as a nation proceed henceforth not simply to give intellectual adherence to that proposition but to act on it. In other words, let us begin the child's education by teaching him health before everything else; first in point of time, first in importance.

Our primary schools have received not a little attention lately. They are better built and have better lighting and ventilation than in the past. We examine the pupils for enlarged tonsils, bad teeth and granulated lids. We are instituting various commendable reforms, which should be continued and expanded, but they all belong to what might be called an extrinsic method of procedure. We must have something intrinsic. We must get possession of the child himself, affect his inner consciousness, modify his personality and give his life a definite bent, so that he will progressively and increasingly contribute by his own efforts to secure and preserve the health indispensable for the fullest use of the opportunities of high school, college and university. One of the most valid arguments against the higher education of women is the well recognized fact that the intense mental application of the really serious student is often accompanied by suppression or irregularity in certain important bodily functions. Therefore, an accumulated reserve fund of health, and habits of health, are as essential to her success at college as the girl's ability to pass the entrance examinations. It is too late to acquire health habits when the need for them begins to be felt, nor can we impart a proper sense of the importance of our health message to the high school girl if we wait until she is 16 to deliver it.

The primary school is universally recognized as the place to acquire certain things indispensable to future mental development and ultimate success. There is world unanimity about these essentials, but how common it is to have to take children out of school for reasons of health before they have got well into the three r's—reading, writing and arithmetic. What I propose is to go back of the three r's and begin all education by instilling into the child before he can read or write some knowledge of the human machine and the laws that regulate its upkeep; to elaborate and intensify this teaching step by step with other instruction, showing by practical illustration how to obtain the maximum yield from this machine.

Childhood is the habit-forming and the impressionable age. Churches wisely recognize this, and by means of the catechism, the Sunday school, and numerous other direct and indirect influences, seek to fashion the plastic mind and heart of the young into harmony with their worthy purposes.

In our plans to develop citizens with a proper sense of their public duties and privileges we take advantage of many of the instincts of childhood. We exhibit the flag, we have the children sing patriotic songs; later we give them outlines of community interests and civic economics. Occasions of national importance, military parades, the presence in the locality of some great public character are seized on to arouse and develop the patriotic spirit. But so far we have not gone to the root of the matter or seriously attempted to make health and the health cult the foundation of the child's education, which I conceive to be the only way by which later we may have lawmakers and law-abiding people who will put healthy living ahead of every other kind of living. The beginning should be made in the kindergarten, where already something is accomplished toward teaching appreciation of form and color; but the wonderful opportunities of this golden period are otherwise almost wholly thrown away. In kindergartens and primary schools singing might with propriety be insisted on. Children love to sing, and every harmless natural impulse should be fully utilized. There is an enormous moral value for young people in everything that illustrates the power of cooperation.

A few good voices will carry along with them the feeble, inaccurate ones. The total volume is inspiring. Each feels that he has contributed something toward the pleasurable result. Furthermore, singing has great value as a health measure because it requires expansion of the lungs. Children love to romp and play, but some of them need to be taught to play right; to breathe through their noses. When they do not do this there is an obstruction. It should be corrected before the consequences to cranium and ear become serious. Defects of bony and muscular structures should be discovered in kindergarten and primary school, because when found early many of them can be corrected.

The teaching of physiology and hygiene to the youngest pupils requires no book, but it does require a trained teacher. Unfortunately, however, there are teachers who do not care for that feature of the work even though they are competent. The reason for their indifference to the subject is that they did not grow up in that atmosphere of health culture which I would like to see created for the next generation. Some teachers prefer telling and reading fairy stories, and a little of that is good; but we have too much of it. The young pupil grows to demand entertainment and then to resent any call on him for serious work. Pleasure in work is an undoubted aid to concentration, and hence, if, in the instruction of a child, we can in some measure coincide with natural bent and inclination for certain studies, there is great gain; but this is essentially different from attempting to conduct education as a holiday excursion up the steep slopes of Parnassus, a journey which still has to be made on foot and involves for rich and poor in worldly goods or mental attributes no small privation and effort. Pleasure in work should be the aid, not the object.

The really clever teacher makes his subject entertaining and interesting but does not wander far afield in search of mere diversion. The teaching of health and the first anatomy and physiology lessons will be by the Socratic method of question and answer, and by the still older case-method first known as the parable. There will be no fear of lack of interest when the day's session begins with a tale like this: "John ran away from his mother. He was so little and he ran so fast that he fell down. There was a piece of glass just where he fell and he struck the sharp edge of it with his hand. What happened? What made the blood come? What is blood? Do animals have blood? What is it for? How was the bleeding stopped?" Such lessons can be varied and multiplied indefinitely and made practical by reference to or, when possible, by actual demonstration with natural objects and natural phenomena.

They are very much mistaken who tell you that children cannot think and would have early instruction rely in the main on memory. Even very young children do far more thinking and think far more accurately than the average adult realizes. They are not capable of abstract thought; but in relation to the things of everyday life they are constantly observing and trying to deduce conclusions.

The child is forever discovering new and surprising aspects of his terrestrial environment and is eager to investigate them. He gets into many a scrape through ceaseless experiment with cause and effect. He is eternally asking, "Why?" What a field is this young mind for the sowing of seed, and how much needless suffering and disappointment he can be spared if we will only teach him the important things first.

In the kindergarten and in the lower grades of the primary school which are to be devoted, in the proposed scheme, to health and hygiene, clean hands, clean finger nails, clean faces, proper carriage, proper breathing; sound, well-brushed teeth, and all the little details of physical deportment that are matters both of social convention and of health (like the use of a handkerchief for a moist nostril, holding up the hand to cover the sneeze or cough) will receive reward and make for class standing exactly as does the correct solution of an algebra problem or a good recitation in the higher grades. As the pupil grows and advances, the health instruction will be increased and extended, and will, I am sure, serve to make chemistry, physics and natural history more interesting in themselves, while, conversely, these topics will render more intelligible the hygienic lessons.

### PUBLIC SCHOOLS AS NATURAL HEALTH CENTERS

Our public schools, then, must become the health centers of their respective communities. Every measure carried out in them should be fully explained, so that the wisdom of preventive measures shall be fully appreciated by the pupil and he may become an advocate of them for the rest of his life. Will not the children who have been cured of hookworm and its attendant anemia, and come to feel the joy of physical and mental vigor for play and for work, be lifelong converts to health propaganda, and will they not be deeply interested when the cause of their previous disability and its cure is explained?

In connection with the bowl of hot broth furnished daily there may be lessons in diet. Temperance in all details of food and drink may be inculcated at the same time that the evils of alcohol, tobacco and narcotic drugs are set forth. Then the necessity for scalding knives, forks and spoons must be emphasized and the menace of the mouth secretions fully explained. The child must acquire, on the grounds of health, the same horror of the mouth secretions that refined people have for the spitting habit.

Such a program may commend itself to you, but the difficulties attending its execution are rather staggering. In the first place, we must have better teachers, and that means teachers who have had special training and will therefore expect better pay. There will be need for special textbooks, and this is one of the most critical features of the whole business; for good books of any kind for children's use, and especially textbooks, are among the hardest things in the world to produce. A mere rehashing and boiling down of an advanced treatise will not meet the requirements at all. We must captivate the imagination. We must arouse and hold interest in the topic discussed; we must stimulate thought, avoid overtaxing the memory and teach only facts which are scientifically sound, however simple the presentation. Now we have men and women perfectly capable of handling hygiene, physiology and physics in the proper way, but publishers are slow to take up new lines until they are convinced that there is a demand justifying the expense of an edition; and so long as such a movement as this is begun in a small tentative way and as a local experiment, publishers will hesitate.

While on the subject of schoolbooks, and having in mind the examinations conducted under the draft law,

which revealed a high percentage of refractive errors in our adult population, I cannot refrain from making something more than a passing comment on the type used in the schoolbooks supplied to young children. Some thought has been given to schoolroom illumination and to proper posture in reading, but nine children out of ten, if left to themselves, get their noses on the paper when they write; hold the book too close when they read, and will do both without regard to the quantity or source or direction of the light. Dr. G. I. Hogue, in an address before the schoolteachers of Milwaukee, estimated that 30 per cent. of the schoolchildren of this country had some visual defect. In Milwaukee, 27.24 per cent. of the schoolchildren had visual defects. In New York City, out of 650,000 children in the public schools, 30 per cent. at least were two grades behind what they should have attained. Ninety per cent. of these backward pupils are suffering from some defect in eye, ear, nose or throat. He estimates that out of 22,000,000 schoolchildren in the United States, some 6,000,000 suffer from ocular trouble. Good food, ample exercise in the fresh air, and hygienic surroundings will counterbalance a host of objectionable practices; but the ever-growing strain imposed on the human eye by modern life calls for special consideration. I profess no special knowledge of the pathology of the eye, and I have consulted no specialist preliminary to making these remarks; but I do not hesitate to declare that the time is ripe for a reform in the construction of children's schoolbooks.

### CAUSES OF EYE STRAIN IN CHILDREN

When you get home from this meeting take your child's geography, history or arithmetic—if not blessed with a child of your own, a nephew, a niece, a neighbor's or a patient's child can supply you—and observe what a large proportion of the text is in fine print. The paper is good; the illustrations are attractive, and the binding is child-proof; but the questions for review, the footnotes, and much of the explanatory matter are set up in six point. I think I am very conservative in the opinion that no child of 10 or under should have to study a book printed in anything smaller than twelve point lower case or eight point capitals, and older children should not have to con by the hour a type finer than ten point. If fine print could be officially stigmatized as a menace to eyesight; if the federal government were to forbid the transmission through the mails of children's schoolbooks improperly printed, we would have a ready solution of the problem. Left to the example of the individual school or to the individual state, the correction of an evil of this kind will not be achieved for many, many years.

This thought and a consideration of the difficulty of securing the services of properly trained teachers and sanitary inspectors and physicians not merely for local experiment, for the collection of data, as a demonstration of some useful doctrine, but as part of a continuous and permanent health campaign, lead naturally to a consideration of government responsibility for the public health fostered and encouraged in the children but affecting also the adult in relation to trade and commerce, preparation for war and so on.

I wish that the public had a fuller appreciation of the really great educational work of our distinctly military services. Through the work of the medical officers of the Army and Navy, our government may be said to have been carrying on for years a health propaganda, within the sphere of the activities presided over by two cabinet officers, affecting directly some 200,000 men in time of peace, and, to a much more limited extent of course, in the past three years acting on a force of several million men. But if we continued to maintain an army of from two to three hundred thousand men and a navy of a hundred thousand, the matters of health which are made prominent in military service would still not directly touch half of 1 per cent. of our population, and we have these men under our influence for relatively short periods—not more than from four to eight years out of a life of three score. This humanitarian, educational work is an incident and not the chief purpose of the departments referred to.

We have to admit, then, that vital as it is for us to maintain a high standard of physical development for the eventualities of war, neither the Secretary of War nor the Secretary of the Navy has any way of concerting measures which will assure for the military needs of the country the necessary number of men of sound bodies with unimpaired special senses. We reject every year thousands of applicants for enlistment who are ineligible for service by reason of conditions which might be regarded as preventable but which are not prevented. We reject men with serious defects of the teeth, with inferior vision or color perception, insufficient development of muscle, bone and tendon, poor heart-action and a defective innervation. Furthermore, the conditions of life in this hurried age; the social environment of the tenement; insufficient training in the home or the lack of a home, and the ravages of alcohol and syphilis in parents, are making for the development of neurotic and unstable types unavailable for service training in peace and of worse than no value for war. All these men are debarred at the recruiting office, but what becomes of them? The Secretary of War and the Secretary of the Navy have no cognizance of them, but they remain a part of the nation, an element of weakness, a burden, a disgrace, and transmit their defects and weakness to their children. The bad teeth; the weak, strained eyes; the overworked, injudiciously used hearts, and the distorted and depraved nervous systems are all preventable. Whose care is it to concert far-reaching plans to fend off from the younger generation and future generations ills that are not by any means an inevitable concomitant of birth?

### NEED OF A FEDERAL DEPARTMENT OF HEALTH

Besides those specifically charged with the defense of the country, we have eight other presidential advisers or cabinet officers, each at the head of an extensive establishment and, together, they are supposed to have a supervisory action in regard to the great fundamental needs of the nation; and yet no one of them is specifically charged with the care of the nation's health. Neither the Department of the Interior nor the Department of Labor takes health into account on any considerable scale. It is by what might be called an accident of birth that our very efficient but small Public Health Service is conducted by the Treasury Department.

The U. S. Public Health Service, originally called the U. S. Marine Hospital Service, dates from 1798, when Congress made provision for the medical care of sailors in our merchant marine by generously mulct-

ing each sailor 20 cents of his monthly pay for the support of hospitals ashore and for the pay of the physicians who worked in them. The money was to be collected by the several collectors of customs, who were of course officials of the Treasury Department. It was not until nearly a hundred years later that this body of physicians had any but a curative function.

In 1878 Congress directed the supervising surgeon to prepare and forward to state and municipal health authorities weekly abstracts of consular reports and other information relating to contagious and epidemic diseases; but it is interesting to note that even in 1796 Congress had recognized some measure of responsibility for public health by passing an act requiring all revenue officers to cooperate in the execution of state health laws.

In 1879 Congress appropriated $50,000 for a National Board of Health, whose existence was limited to a period of four years. This board owed its creation to the terrible epidemic of yellow fever raging in the Mississippi Valley. It was after this that the Marine Hospital Service was financed by funds voted by Congress for the specific purpose of preventing the spread of epidemic disease, more particularly smallpox and yellow fever.

In 1892 the Marine Hospital Service achieved notable results in preventing the introduction into this country of the cholera so extensively prevalent in Europe. Then came the passage of an interstate quarantine law and later a national quarantine act in virtue of which a systematic examination of all immigrants has since been maintained. Gradually this service has assumed a distinctly educational function. Its research laboratory was one of the first agencies of the kind. Its work in connection with malaria, pellagra, hookworm, infantile paralysis, leprosy, rabies, typhoid and Rocky Mountain fever, school hygiene, the pollution of water, trachoma, the problems of rural life, and railroad and industrial sanitation, has been of a high order.

I give this outline of the history of the United States Public Health Service because I think too little is known of what it has accomplished; because its growth in importance shows very plainly that, as the value of this kind of work became more and more apparent, ways and means were found to make it possible. The work has been economically done by trained experts often opposed by local prejudice but far more seriously hampered by general indifference and by the fact that they could act only in an advisory capacity, and were only a side issue in the Treasury Department, whose main concern was with other and very unrelated affairs.

This history of the Public Health Service illustrates how the government has been able to play a rôle of considerable importance in promoting public health though acting in an ancillary capacity, and we see how from purely medical practice its members have assumed more and more an educational function. Then, too, in recent years the government's obligations have been recognized by the passage of pure-food and child-labor laws; by enactments regarding the sale of narcotic drugs; by assigning to the Public Health Service supervision of the manufacture and sale of serums and vaccines. But today the public health is, so far as the federal government is concerned, a matter of secondary importance, whereas it should be first.

### WASTAGE OF LIFE AND NATURAL RESOURCES

As a people we are of all civilized nations the most wasteful of human life as well as of food, natural resources and public funds. France and Italy have a minister of public education, and England has a ministry of health. During the year 1917 our railroads, which under government administration cost us a million dollars a day, were responsible for 194,000 injuries, 6,300 of which resulted in more or less serious crippling, and for 10,000 deaths. In the same year the funds assigned for the maintenance of the U. S. Public Health Service, including its laboratory, its department of zoology, its field work, the salaries of 200 medical officers and 1,800 other employees totaled $3,250,000. That is to say, the national government's expenditure for its only accredited and official agency for the care of the national health was at the rate of a little over 3 cents a head for the total population. As regards vital statistics, birth registration and morbidity reports we are far behind Europe.

Doubtless the size of the land in which we dwell and the large population account somewhat for our laxness in these things, and of course the nature of our political organization does not make for a uniform and general plan of endeavor to increase physical endurance and physical capacity for output. Absorption in local needs and exaggerated or misconceived ideas of local rights bring a forgetfulness of the interdependence of these states and of the universality of public health interests. How often it happens that the least salubrious section of a state becomes the least populous, though its forests or mines or water power entitle it to be the most thickly settled. If sparsely inhabited, it of course has scant funds for ditching and draining, wholesale eradication of mosquitoes, adequate water supply or whatever the remedy may be. Under federal administration the greatest need would constitute the greatest justification for reclamation, and help would be more generally and systematically extended to counties and states which could not afford to remedy expensive local defects.

A department of health in Washington would be purely civilian in composition and would call to its aid or give its assistance to all private or corporate forms of endeavor, very much as the Army and Navy call on the Carnegie Foundation, the Rockefeller Institute or the American Red Cross. Then we would coordinate effort for improved public health of every kind and make it continuous and progressive instead of desultory and sporadic, and many problems would be diligently attacked which now, in spite of their importance, must wait until some great calamity excites public attention or arouses the sympathy of a philanthropist.

### FACTS REVEALED BY THE OPERATION OF THE DRAFT LAW

We have learned and the general public has learned a good deal about our national weakness from the facts revealed by the operations of the draft law. Massachusetts, stimulated by the knowledge of the number and character of the rejections for military service, and other sections of the country alive to the declining birth rate of the white race are proposing enactments to remedy crying evils in the physical development of our people; but years may pass before other sections awake to the importance of these efforts. Mean-

while the whole nation is concerned, and the nation as a whole should be at work to remedy what is wrong.

If Massachusetts or Louisiana were to conclude that fine print and footnotes in children's textbooks were producing eye strain in the pupils of the primary classes in its public schools, and passed laws forbidding the use of a book in any of their public schools unless the type was of an ordained and specified size, this would be fine for the children of those two states. If, again, these sections of the country took steps to improve the general physical development of the young, this would be commendable and useful; but to what extent could Massachusetts or Louisiana supply the needs of the country in time of war? There is much to be learned from war, hard and cruel lesson though it be. As a nation shows itself in war so it is in peace. There is in war a test of the nation's capacity for the tasks of peace. War disrobes us of the figments of conceit and fancy, of self-satisfaction and egotism, and leaves us naked before the mirror of truth. The World War has been a liberal education to some of us. It should be used as a means of enlightenment to everybody.

How are we to explain the fact that the older sections, such as New England, New York, Virginia, North Carolina and Louisiana, lead in nervous and mental disorders; that in defects of the eye New York, Boston, and New England generally and the cities of Ohio, Michigan and Illinois were the most conspicuous; that Rhode Island led in defect rate and Vermont came next, while Kansas had the lowest defect rate of all the states; that the extreme northeast, including New York and New Jersey, made the poorest showing in regard to the teeth? Are these fortuitous facts or are they susceptible of explanation and correction? It is clear that when we have as physicians informed ourselves on these topics there must be education of the public to prepare it to cooperate with, and there must be legislation to enforce, the necessary corrective measures.

There is a mystery in the report of the Provost Marshal General that Oklahoma and Arkansas for the number of men examined gave the highest percentage of men going into Class A, and Arizona and Rhode Island the lowest—men in Class A being the fully qualified, able to see and hear well, able to transport themselves by walking, having a circulatory apparatus able to stand the stress of physical exertion, the intelligence to understand and execute military maneuvers, obey commands and protect themselves.

### NATION-WIDE VERSUS STATE CONTROL OF HEALTH MATTERS

How unpractical to expect that any one state alone, or even two or three, should go into the study of these things at considerable expense, or that just and reliable conclusions could be arrived at from such a partial study! These are national matters most easily, most economically and most satisfactorily studied as national questions by national rather than local agencies. Not for a moment do I undervalue the investigations carried on by benevolent and scientific societies or corporations. One would have to be profoundly ignorant, deeply prejudiced, singularly ungrateful, to do so. Such enterprises excite discussion and help to create public opinion; but how slow is the general advance, how lacking in uniformity and concentration are the efforts of individuals and societies working in the interests of a hundred million people! In America we are too prone to leave general measures for general betterment to professed philanthropists; and here as elsewhere what is everybody's business is nobody's business. There is a supineness, an inertia, a criminal neglect in the nation which surrenders to private agencies matters which are of vital concern to the development and expansion of the race and to its triumph in peace or war. Shall we be content to rely on the public spirit of liberal and enlightened millionaires, of a Carnegie or Rockefeller, to do for us, with all our boasted wealth and civilization, things which smaller and less rich nations regard as essential obligations of the governments they maintain and support; and is it not a devitalizing, corrupting, enervating, in every way demoralizing influence in our national life to trust for essentials of national happiness and success to what we must admit are accidental agencies?

I can perfectly understand a strong disinclination to any step that might appear to open the way for government control or restriction of the practice of medicine or that tended to paternalism, especially in view of the agitation developing here and there for all sorts of medical, dispensary and hospital privileges. On the other hand, history teaches that when in the complexities of modern life radical tendencies assume such force as to result in insistent demands for unusual and excessive privileges, it is easier to anticipate and circumvent than to overthrow them in open conflict. History teaches also that greed and violence are usually the result of previous injustice or neglect. There are no fortuitous happenings in nature. The geologists have long since ceased to talk of catastrophism; the physicists and chemists no longer recognize spontaneous combustion, nor do the biologists admit spontaneous generation. In the same way the convulsions of society always have a definite cause, although it may be deeply hidden. Whenever the superior intelligence and education of a given time or locality are threatened with overthrow by the force of an unreasoning mass, we may be sure that there has been neglect on the part of the superior or better favored to discharge its obligations to the inferior or less favored element. If as a nation we are lacking in all the proper provisions for promoting health and longevity; if the physicians who know about these things ignore their obligation to agitate in the matter and obtain results on legitimate lines; if everything that we consider needful to health in connection with industries, public carriers, charities, and the like is not done according to the means and the light we possess, we may be sure that sooner or later a wave of protest and clamor will sweep over the nation and that we physicians, along with other members of the educated classes, will have to pay an excessive price for previous passivity and indifference.

As a general proposition, I am firmly opposed to the disposition to saddle every public and semipublic enterprise on the government, a tendency arising from a profound misconception of government and its legitimate function, and often associated with a disinclination on the part of those displaying it to perform their own individual duty. But I am unqualifiedly in favor of a national department of health with a cabinet officer at its head which shall by its very creation give a great object lesson to our people and shall correlate and vastly expand all the efforts now put forth for the improvement of the race, the prolonging of life and the full development of physical capacity for work and

production. By reason of what it has accomplished in the past and because of the incalculable volume of influence which its individual members can exert in the various communities where they labor, I believe this this Association can effect this legitimate enlargement of government effort as soon as it sets to work whole-heartedly to do so.

I have drawn your attention to the vast latent possibilities for health propaganda in the public schools. I have tried to show that the nation's health, being a vital national concern, should be the particular care of a department of government on a par with the importance, dignity and power of existing departments which affect commerce, labor, revenue, agriculture, the mails and military preparedness; that popular government cannot ignore the human element, the physical element in the people. Permit me now to advert briefly to the practice of medicine as bearing on general scholastic training.

In the main, the medical curriculum of our leading colleges seems satisfactory, judged by the results. There are two points, however, which I do wish to mention briefly. In a recent able and discriminating paper, Dr. Hobart A. Hare of Philadelphia has brought out the well recognized fact that all recent graduates and many old practitioners are profoundly ignorant of drugs and how to prescribe them so as to get the desired results, and he has made an extremely important distinction between the invaluable researches of the scientific pharmacologist on the one hand and the teaching of practical therapeutics on the other. The medical student has no need, as an undergraduate, to engage in experimental work; but he should be taught what and how to prescribe, and to this end should have a short, simple course in practical pharmacy and a very thorough course in applied therapeutics.

In the second place I beg to submit that hygiene and sanitation are not given sufficient prominence in our medical courses. This is amply proved by the poor showing made in these subjects by the candidates appearing before the National Board of Medical Examiners. These topics should receive special emphasis, and the candidate for a diploma must be made to realize that competence in surgery, obstetrics or bacteriology will not atone for deficiency in a branch which, while not by any means fully setting forth the modern conception of medicine as a profession dealing with people collectively, socially and industrially, at least paves the way for a grasp of that conception.

For the medical school to provide a few lectures on hygiene is not enough. The school which does no more than this is not alive to the call of the twentieth century, which demands through the voice of rich and poor, of high and low, better living conditions for the world. We are tempted sometimes to berate the public for its indifference to health and its callousness to the wise injunctions of medical writers and speakers concerned with prolonging life by care of the body; but is not the public bound in such a matter to be behind the professed master, and are we not as the whole rather sunk in crass indifference? How many capable practitioners are really in a position to give sound, scientific advice on the thousand and one details bearing on the preservation of health derived from a knowledge of hygiene in any way comparable to the knowledge they are bound to possess in a score of other things if they are really the kind of physicians they ought to be? Is not our profession constantly brought into discredit by the ignorance of the family physician and of the eminent specialist about matters of real and vital interest to the general public?

### PRACTICAL KNOWLEDGE OF HYGIENE NEEDED BY PHYSICIANS

Our semiscientific and popular current literature, and even the daily papers, are constantly giving out bits of information about the flea, the louse, the bedbug and the mosquito in their relation to the transmission of disease. A layman does not quiz his physician about anatomy or pathology, but he does turn to him for enlightenment about these and kindred matters bearing on health and disease which he can understand and on which he would like to be informed. When the physician cannot fully satisfy the questioner about the rôle of these insects; about the potability of water; the danger of damp, newly constructed buildings; the proper trap to a water closet, and the infections that may be acquired from intimate contact with domestic animals, he loses enormously in prestige and, what is more important, he loses the chance to thrust home some valuable lesson in public health and public duty.

We are beginning to develop here and there schools offering special courses and special degrees in hygiene, and I think this is a forward step, for we must have men of special training prepared to do advanced research work in this field; but can any one reasonably pretend that the medical profession can wisely permit this branch to become one for specialists only, and that, while pathology belongs to the physician, hygiene and sanitation are not his sphere? On the contrary, will not the exhaustive teaching of hygiene and of public health medicine in our medical schools immeasurably enlarge the scope and improve the character of the practice of medicine itself?

Let us institute a thorough course in hygiene and sanitation, making a real knowledge of the subject indispensable for graduation. We could include in this course whatever features of the specialties bear directly on the public health.

### RESTRICTIONS AS APPLIED TO CANDIDATES FOR ADMISSION TO MEDICAL SCHOOLS

Far more important than determining what particular subjects are to be emphasized and how the medical student's time is to be apportioned in classroom and laboratory is the standard of fitness to which a young man must conform before he can be permitted to study medicine. Admission to a medical school contains the implied promise that diligent application for a given period will qualify him for a diploma as a doctor of medicine. In justice to the public, to the profession, and to the candidate we must endeavor to establish three things before the medical school opens its doors to him. The prospective physician must be sound in body; he must have sufficient mental training and acquirements to enable him to pursue the course with profit; he must give evidence of those personal, temperamental and moral qualities which promise reasonable adaptation to the highest aims and purposes and to the best practice of the American profession.

The first step in establishing the standard for admission to a profession is of course to define the scope of that profession. The distinction between medicine as an unlimited science and medicine as an art, more limited in scope and confined to a comparatively nar-

row field, was alluded to in these words by Huxley: "It is so difficult to think of medicine otherwise than as something which is necessarily connected with curative treatment that we are apt to forget that there must be and is such a thing as pure science of medicine." I have this distinction in mind when I urge that we shall not so arrange our scheme of medical instruction as to make it lean unduly to fitting men only for the practical curative art biased by the American inclination to demand immediate and practical results in a business and financial way. Some of our graduates will infallibly prove by temperament ill adapted to private practice; and if they have had during their student days no vision of medicine, no introduction to it as a science, they will drift out of medicine entirely. If our schools are wholly planned with the idea of turning out only men who can at once become practical bedside clinicians, do we not to some extent limit the chances of our country's taking a prominent part in the further development of the science of medicine? It is this fear which makes me feel that there is a place in our medical faculties for teachers of certain scientific branches even though they are not themselves practitioners. It behooves us to have close affiliations with the pioneers, and as Maeterlinck has well said: "We must beware of abandoning ourselves unreservedly to the prevailing truths of our time."

The distinction between the science and the art of medicine is a vital one. In the program of our medical instruction we must recognize that these two aspects of medicine exist, and we should provide instruction that will make it possible for graduates to be scientific and practical healers of disease or to develop as purely scientific investigators.

People have been inclined in the past to consider the clergyman and the churchman dogmatic; but dogmatism is also the besetting sin of medical centers, medical schools and practicing physicians. We may not be able to prevent individual practitioners from being narrow and prejudiced in their old age, but we can at least start our young men off in their professional career with a strong impulse toward liberality of judgment and breadth of view.

There is, I am convinced, a real danger in the modern trend to practical instruction so called. The danger of neglecting the necessary fundamental and more or less abstract teaching for the distinctly enjoyable clinical and bedside work is increased by the realization that the latter has stronger attractions for the student and that it greatly facilitates the acquisition and retention of information furnished in the classroom. Students and even teachers speak of schools as theoretical and practical, having in mind apparently the distinction between didactic lectures and laboratory exercises; but it is very easy for an unconscious transposition of ideas to lead one to think of theoretical instruction as removed from the domain of usefulness to the sick because the word theoretical is connected with the idea of speculation and hypothesis. Now, as a matter of fact, by theoretical instruction in medicine we mean the abstract handling and presentation of scientific truth as compared with its application as a practical means of healing. With this clarification of terms it becomes manifest at once that the school must be primarily the place for medicine as a science; for if the young physician have not scientific knowledge, what is he to apply when he comes to the bedside?

### ERAS OF MEDICAL TEACHING

We have known in this country the era of strictly practical medical teaching. The physician jogged along from house to house, and the neophyte who accompanied him saw the patients and picked up what he could about them through the dissertations of the preceptor. It was followed by the era of cheap medical schools where men were shown at clinics the manifestations of disease: where they committed to memory prescriptions for fever or diarrhea or cough. These schools had short courses, and the fees for diplomas were essential to their maintenance. We have, through the American Medical Association, rung the death knell of the medical diploma mill. But historical justice compels us to admit that there was much excuse, in our country's undeveloped period, for giving some kind of brevet to men willing to settle and supply what primitive rude aid they could in remote and sparsely settled sections that would never have attracted or adequately compensated those who had spent the time and money necessary for more complete training in the half dozen high-grade medical schools we possessed. Conditions are very different now; there is a more equal distribution of wealth and education throughout the land; standards and requirements of various geographic sections are more uniform.

Now let us not be led astray by the insistent demand that our improved schools shall turn out men able from the start to display a high degree of curative skill, for then we shall unconsciously develop a type of school that for our times and standards is little more than a glorified elaboration of the narrow, superficial institution of an earlier day. Let us teach the science of medicine as far as we know it and superimpose on and combine with that, regardless of time and cost, the art of applying it. Let us not be afraid to weed out those candidates for admission to the schools who have neither the acquisitive nor constructive faculties which give promise of development. Let us be primarily concerned with what our graduates will do for American patients and American advance in medicine five and ten years after graduation.

I look forward to the time when we shall have in this country an even higher standard than now and uniform medical requirements with comprehensive courses of five and six years as in England, France and Italy. The small, ambitious and ill financed private medical schools of the past have made impossible for us the practice of giving medical degrees of different values representing different degrees of preparation such as prevails abroad, because no school could expect to attract students if it conferred a degree less pretentious than that of the others. That a need for something of this kind has been recognized by the profession in this country is shown by the rise of the American College of Surgeons and other American colleges, to be a fellow of which implies an advance in attainments beyond those of the ordinary graduate. This need is shown, too, by the existence today of the National Board of Medical Examiners, an incorporated but privately supported organization whose aim is to stamp the successful candidates coming before it as men of peculiarly liberal acquirements.

The gradual elevation of state requirements for license to practice and their constant approach to uniformity justify this board in looking forward to a time in the near future when we shall have a single standard for the whole country; when men who have by their

actual work confirmed the justice of their title to practice in one locality shall not be under the painful necessity of undergoing examinations afresh if questions of health, family, finance, research or specialization lead them to remove to another section; when we can as a nation have proper reciprocal medical relations with the great educational centers and the licensing bodies of Europe. It is in view of all this and because of the need of a good deal of reform in our actual conduct of examinations that the National Board of Medical Examiners was organized. It is in pursuance of our desire to secure from Europe proper recognition of American progress in medical education, to tighten the bonds which unite us with our foreign brethren and to enable us to profit by their greater experience that this board invited to America as its guests the following distinguished gentlemen: Sir Humphrey Rolleston, K. C. B., of the Royal College of Physicians; Col. H. J. Waring, Fellow of the Royal College of Surgeons; Dr. Norman Walker of Edinburgh, and Professors Grégoire and Roussy of the Faculty of Medicine of the University of Paris.

In practice and in our preparation for practice we swing pendulum-like from extreme to extreme, and it would almost seem as if real activity, earnestness and conviction are radical and exaggerated, and that inevitably the effort to moderation and a rational conservatism involves inaction.

Galen in trying to stabilize medicine, to free it from wild speculation and the vagaries of individual schools and the excesses of individual teachers, bound it with iron bands and stopped all progress for thirteen hundred years. The Faculty of Paris, standing like a rock for a maximum of book learning, insisting that the physician must be a savant, holding to narrow conceptions of the dignity of the profession, despised the manual operations of surgery, exacted from aspirants for a license an oath to do no surgery, and by cutting itself off from the opportunities for acquiring that knowledge of anatomy, physiology and pathology afforded by operative investigation made the practice of medicine in France as dead and as meaningless as the branch which it so effectively circumscribed for four centuries. But just here is a feature of the development of medicine that we are apt to overlook. It was not until the itinerant bone setters, the cutters for stone, the oculists, the herniotomists succeeded in being admitted to the schools that they exercised any vital effect on the profession. The schoolmen were narrow, as every one admits, but the practical men who had not been to school were butchers, and they had no real influence until surgery in the person of Felix cured Louis XIV of a fistula in ano which had never been benefited by salve or unguent. Maréschal, successor of Felix as court surgeon, influenced Louis XV to establish five chairs of surgical instruction, and La Peyronie induced him to pass an ordinance making it obligatory for masters of surgery to qualify first as masters of art.

### THE EVILS OF TOO PURELY ACADEMIC INSTRUCTION

In recent years we have perceived with ever increasing intensity the evils of a too purely academic instruction, and in the inevitable reaction to practical methods we run the risk of going to an equally dangerous extreme the other way. It behooves us to find a way to teach so that the two lines shall have their proper proportion.

The Renaissance, which introduced a deeper and wider study of the classics, was at the same time the period of humanism, a term I like because it suggests in itself how with the revolt against dogma came a fuller recognition of the human side of life; of the rights, the claims, the needs of the individual and an increasingly general recognition of the fact that the study of mankind is man. The Renaissance marked also what may be called the resurrection of the human body from the grave of ignominy and contempt into which it had been cast by the early Christian and medieval church in its fight against the lusts of the flesh.

Through the stretch of the centuries men have sought in vain the anatomic seat of the soul. Samuel Johnson aptly remarked that "all power of fancy over reason is a degree of insanity." We waste no time today trying to locate the soul in pituitary body or pineal gland, and we insist that physical findings are the basis of diagnosis and treatment; but the physician's preliminary education must take into account the sentimental and imaginative side of life. What true and worthy practitioner fails to feel the appeal of the soul in the searching look, fastened on him as he enters the sickroom? The physician's principal function, as in the days of Hippocrates, is still to assist the healing power of nature. We know that with all our science much of our medicine is without efficacy so far as its direct ostensible purpose is concerned. The doctor's personality, his power to inspire hope and confidence, his understanding of human conduct, his analysis of character remain his chief asset at the bedside. All ages, whatever the attainments of science, have produced great healers, and the family physician of an earlier generation with his kindly sympathy, his unselfish devotion, his capacity for toil and vigils must ever remain the ideal minister to the sick. It is the personality of the upright, big-hearted man whom people trust to use what knowledge he possesses rather than abstract scientific qualifications that counts in the long run. Can we expect men to qualify for the sacred function of receiving the confidences of sufferers in mind and body if we expunge poetry and philosophy and art from their preliminary education and wholly replace fairy tale and legend, Longfellow, Tennyson, Hawthorne and Shakespeare by so-called strictly scientific premedical work? We want a man broad in interests and understanding, not the recluse who finds more pleasure in dissecting a beetle than in viewing a sunset, who gets more soul satisfaction out of the hum of a machine just because it is a machine than in listening to a Patti singing the Last Rose of Summer. Dr. W. M. Beach of Pittsburgh well epitomized all this when he said at Atlantic City last year that "proficiency in the physician requires development in the direction of spirituality; there is a curative force that is moral."

### THE KIND OF MEN NEEDED

We want the men who take up medicine in America to be big men; big in heart, big in brain, blessed with vigorous health. The possession of a store of facts is nothing as compared with evidence of native ability and sterling integrity of character. Before we permit a young man to matriculate in medicine we should have assurance that he is careful of his health and careful of his financial obligations; that he commands the respect of former classmates; that he has qualities that make for leadership: above all else that he understands and justly values and possesses that indefinable,

exquisite, delicate something as intangible but as real as the bloom on the plum and the fragance of a wild flower—the sense of honor. Our inquiry into the premedical career of a prospective physician will be of infinitely more value if it enlightens us on these points than if it merely establishes his ability to memorize a book and on admission we discover that the high marks and the multiplicity of diplomas were won by a physical and moral runt. When our schools generally, as one or two now do, come to view the premedical standing as one to be deeply investigated and carefully passed on, we shall have fewer graduates, perhaps, but a relatively larger number of real physicians in whose ranks there will be no fee-splitters, no men of shady reputation and questionable conduct to disgrace us and forfeit our title to the confidence of fathers and mothers.

It is time that the subject of examinations be very thoroughly gone over by professional educators, and substitutes found for such methods of testing a candidate for promotion or honors as do not indicate reasonably lasting acquisition. The bulk of our examinations as at present conducted have but little to recommend them. Their only merit and the reason why the pedagogic world hesitates to discard them lie in the powerful stimulus they provide to the study of even the most difficult branches and the most obnoxious details. When, however, we stop to consider that the labor incited by examinations is usually not for the acquisition of knowledge but for the passing of the examination; when we admit that the modern examination determines, in the main, a very ephemeral form of attainment, we may find that something better than the examination may not be so very difficult of accomplishment after all.

### PRESENT METHODS OF EXAMINATION

The present method is vicious for two reasons: First, it fails largely of its object because we do not get a correct idea of mental capacity and mental development, nor a proper appreciation of a student's grasp of the subject by examinations which he can undergo successfully by cramming. In the second place, cramming is a devitalizing process and the very opposite of memory cultivation, because behind the effort to acquire is the deliberate conscious purpose of unloading the mind of the stores taken aboard as soon as a given contingency has passed. The willingness to forget and the deliberate effort to forget negative and weaken the retentive power.

Memory is still an essential, but written examinations often demonstrate only that facile and superficial memory which picks up and carries for a while under stress of need very much as a stream in freshet carries down rocks and earth, dropping the heaviest first and bearing the sand even to its own finish in the ocean.

For years, in our examinations at the Naval Medical School in Washington, we have allowed laboratory notes to be used by candidates in the chemistry and hygiene laboratories, considering that memory for the exact quantities in various solutions is not required, nay, undesirable, where men are trying to do accurate work. What we demand are the principles involved, the meaning of the steps, the interpretation of the results. This is the method followed by the National Board of Medical Examiners. It is in the necropsy room, the laboratory and the hospital ward that we test the candidates in an endeavor to ascertain what they know by what they do, instead of judging entirely by what they say or write.

It is gratifying to observe that medical men are giving more and more thought to the subject of premedical education, and I consider this a most favorable augury for the future of American medicine. We may not yet be in absolute accord as to the means of obtaining the best type of medical student, but it is something to agree that we need in medicine the scientific investigator as well as the scientific practitioner, and that each is dependent on the other. We are agreed too that what we require in preparation for medicine is not scholarship but a process of training which shall develop a certain mental attitude as well as a certain degree of mental power. This unites us at once with the interests of the legal and other liberal professions, and a common platform as to our desires inevitably simplifies the problem of arranging a satisfactory high school course. If we wanted a strictly scientific course as a preparation for medical study we should be compelled to arrange for the paths of school and college education to diverge very early from those to be pursued by men looking to some other career; but I hope we realize today as never before that the true aim of preliminary education is not so much to fit men to study medicine or law or architecture as to help them achieve the fullest success in the pursuit of these several callings. If our primary requirement is for capable men, then we can combine with every other profession which is similarly more concerned with molding character and increasing the range of mental outlook than in making the final technical course easier by a preliminary one which invades the territory of the professional school.

### BASIS FOR SCIENTIFIC STUDY

We must concede the soundness of the contention of Bain of Aberdeen that: "In a right view of scientific education the first principles . . . of all the great sciences are the proper basis of the complete and exhaustive study of any single science."

Sir George Makins, president of the Royal College of Physicians, does not think that we should relegate the teaching of physics, chemistry and biology to the premedical period for fear that the medical student may not have a sufficiently thorough grasp of these subjects. On the other hand, Thomas Huxley held very emphatically to an opposite opinion. He said: "The great step toward a thorough medical education is to insist on the teaching of the elements of the physical sciences in all schools, so that medical students shall not go up to the medical colleges utterly ignorant of that with which they have to deal; to insist on the elements of chemistry and the elements of physics being taught in our ordinary and common schools so that there shall be some preparation for the discipline of the medical colleges."

I agree with both Makins and Huxley. My own view is that these subjects should be taught in the school and college course and in the medical school also. In the preliminary courses, pupils should acquire a knowledge of the great fundamental principles involved and the methods employed in scientific work, because all this emphasizes the value of accurate observation and correct interpretation of facts, and both of these mental processes are invaluable in every department of human activity. The future lawyer, doctor, business man needs this training. In the medical school chemistry, physiology and biology will be taught with reference to their bearing on medicine. But the premedical courses must be very different from those now pursued. The textbooks must be simpler and the

courses be made general, and then pupils must be compelled to master what they go over. There is far too much superficial teaching, too much smattering of knowledge at present. This leads to nothing and negatives the very object in view. Huxley appreciated this and usually preferred to teach the beginners himself, so as to be sure that they started with a proper comprehension of the fundamentals, and he left to colleagues and advanced students the subsequent conduct of the classes.

I should put biology and physiology or nature lessons among the earliest, since they go naturally with the health teaching and the hygiene by which all schooling should begin. Next would come physics, which will be attractive to the great majority of active-minded youngsters who are animated by a desire to do things, to make things, to understand electrical devices, automobiles, telephones, flying machines and the like; but I would see to it that they did not waste their time in trifling manual accomplishments but were enabled to understand the principles involved—the development and transformation of energy, latent heat, expansion and contraction of gases and gravitation. Chemistry would come later still. The college course would permit a resumption of the physics and chemistry, at least for medical students, while others would elect something more distinctly related to the careers they planned to embrace.

It will be impossible, I fear, to allow for more than two years of college for the intending student of medicine with five years of classroom and practical work still ahead of him. We want him to graduate while relatively young so that he may face the discouragements and trials of early practice and the long uphill climb to a financial competency while still possessed of the resilience, the buoyancy, the freshness, the enthusiasm, the high courage and the endurance of youth.

In enumerating these so-called scientific features of premedical education it is important to remember that a slightly greater familiarity with them prior to matriculating in medicine will not compensate for the dwarfing effect of a course restricted to them and unbalanced by studies of a complementary character, bearing always in mind that the object of premedical work is to develop, not to indoctrinate. Bain has well said that "the defect of the practical man is the limitation of his tests to his own sphere of working; he seldom learns to extend his method into other spheres." Now the sciences have a definite place in all education quite apart from the direct acquisition of useful facts. Observation, analysis of evidence, accuracy of statement and definition, the insistence on proof and demonstration are among the features that render scientific studies so useful in themselves; but are we not guilty of unpardonable onesidedness if we let only the physical part of the animal man occupy our pupil's attention in our enthusiasm for nature study?

It is many years since Mr. T. Davison wrote these significant words: "A man who has been trained to think upon one subject, or for one subject only, will never be a good judge in that one; whereas the enlargement of his circle gives him increased knowledge and power in a rapidly increasing ratio. So much do ideas act not as solitary units but by grouping and combination; and so clearly do all the things that fall within the proper province of the same faculty of the mind intertwine with and support each other. Judgment lives, as it were, by comparison and discrimination."

### MISTAKES OF THE MIDDLE AGES

Education, and as a part of it medical education, in the Middle Ages, was distinctly scientific in character. The strong literary bias and the study of languages which became so marked in the seventeenth and eighteenth centuries did not develop until the Reformation and after. This is not commonly appreciated, but it is a fact. Mathematics, astronomy, chemistry—or, if you choose, astrology and alchemy—and even metaphysics, grammar and rhetoric, as they were taught, were not literary studies but distinctly along the lines of scientific training. True, much of the science of the Middle Ages is held in contempt today; but science and its standards are forever changing, and we cannot require of educators that they shall teach the unknown but only that they shall be abreast of their times.

Now, then, when we consider that for 400 years the premedical studies of Europe were grammar, rhetoric and dialectic, making the trivium; and music, arithmetic, astronomy and geometry, making the quadrivium (called collectively the seven liberal arts but really sciences not arts), and when we realize how absolutely sterile of results was the medical practice to which these premedical studies lead up, have we not some basis in history for questioning the extreme ground which some people take today in decrying the value of the humanities and insisting on purely technical preliminaries?

The Hon. A. J. Balfour, an Eton and Cambridge man, author of the Education Bill, one of the early champions of the higher education of women, an earnest advocate of technical training and of every form of practical instruction which might enable the British man of business to hold his own with foreign competitors, epitomized his thoughts on education in a speech delivered in 1899 at the Ley School. He admitted that a few years of Latin and Greek study do not suffice to accomplish the intended purpose of introducing the scholar to the beauties of ancient literature in the original, but he did insist on the importance of some form of literary education, nay, regarded this as indispensable. I think the opinion of so versatile a man as Balfour, once a successful opponent of Gladstone, leader of the House of Commons, an uncompromising yet locally popular secretary for Ireland and the representative in Parliament for the laboring men of East Manchester, is well worth heeding.

### THE PLACE OF LATIN AND GREEK

There is no question that we must give up Greek, and I believe that Homer, Sophocles and other ancient authors will give more pleasure through the good translation of ripe scholars than from the perspiring schoolboy's own efforts; but I consider that Latin, if ably taught, has a place in our schools. I do not offer in support of this study that it helps in acquiring scientific nomenclature, for that is as roundabout and difficult a way of doing the thing as Charles Lamb's roasting of a pig by burning down the place of his abode. I believe in three or four years of Latin because, along with other and indirect benefits, it is the easiest and surest way of teaching boys and girls to write and speak English correctly. I cannot take the time to marshal the arguments for this contention. Suffice it to say that the elasticity and simplicity of our construction, the practical lack of declension and conjugation inherent in our language, as well as many features of American life and thought, combine to

make for careless and inaccurate writing and speaking. Latin is not an elastic, plastic vehicle of thought like Greek, English or French, but an inflexible one cast in an iron mold. Properly taught to young people of reasonable intelligence, the translation of Latin into English prose can be made as fascinating as a picture puzzle, once those forms have been mastered which are essential features of the organic structure of a sentence and give the clue to its meaning. The study of Latin is thus a powerful though indirect method and, because indirect, the easiest way of teaching English grammar. It should be begun early when the necessary memorizing will be least laborious, and continued beyond the time when the pupil would be put at English grammar, a study of great difficulty and universally obnoxious. Grammar can be taught, as it were, objectively and solely through Latin, which illustrates the rules of construction in a way that our own language does not.

### NEED FOR MORE ATTENTION TO ENGLISH

And if I am right in this idea, I think the place of Latin is secure in the schools because the one thing that we must insist on is that our boys and girls, whatever their purpose and destiny in life, shall speak and write English correctly. Nowhere in the world is there such need for the teaching of the national language, because nowhere is the school population made up of such a variety of elements, and in the case of many their mother tongue is not English. With no pretension to a mastery of style and no great sympathy with the exaggerated purist, I am nevertheless frequently surprised by the laxness, the inaccuracy, the atrocious barbarisms of the language of daily conversation and even of the public press, the magazines and the books printed in this country. Long observation as examiner on Navy boards has brought me to a realization of the sad fact that the young men of America can go through the high school and even obtain a baccalaureate degree, and yet be incapable of writing plain and simple English correctly. In this respect I submit that we are behind our parents and grandparents. What would have been an occasion for mortification and reproof fifty years ago is today a jest, and our young people are permitted a slovenliness of expression which surely reflects a decay of standards in more ways than one, encourages mental laziness and must have a depreciating effect on cerebration itself.

It is to deem knowledge of little value and to take a narrow, selfish and limited view of intellectual pursuits of any kind to deliberately despise and neglect language, the instrument by which we contribute to others and make them sharers of our work and its results. The crying need of premedical scholastic training in America, and of all school and college training at the present time, is for reform in the teaching of English. By this is not meant that boys and girls must write in learned or stilted or flowery style. Nothing of the kind. But accuracy and clarity of expression are valuable for all and essential for the professional man.

With all due respect to our capable, earnest and largely underpaid teachers, I must confess to a feeling that our public school courses are suffering from too large a variety of subjects to permit thoroughness. This is serious, because it is not so much what is taught that counts, as the permanence of the knowledge and the effect on the acquisitive mechanism produced by the way study is conducted. A superficial acquaintance, a smattering, a glossing over of a thing is pernicious in the extreme. Better no schooling than such a process. For some of this mistaken policy and for the idea that school must be a place of entertainment and amusement rather than of hard, grinding work, I hold the parents responsible. Too many of them, while contributing little enough toward education in the home, resent the pressure of the teacher and yet desire their children to leave the high school with a large variety of showy accomplishments.

What is put before the student of any age must demand effort; must consider what he may be able to attain by expansion and not what he starts with. For true progress education must be calculated not from the standard of averages either of ideals or capacity but with a conception of a maximum achievement and ability. It must give opportunity to all according to their talents but provide always for the development of future leaders and thus insure a gradual heightening of standards and conceptions.

As we contemplate the anomalous developments of the past year are we not bound to pause and consider whether we have not long been radically wrong in our whole system of education? The constant clamor of recent years to make education practical, to make the school courses adequate training for the real business of life may have arisen from a mistaken conception of what the real business of life is. Have we been a little hasty in assuming that poetry and philosophy, and much of what the thoughtlessness of American youth regards as old fashioned and useless, are not beneficial enough to justify the time they take from the supposed practical studies? Have we unconsciously been encouraging courses of study that breed only money-makers and worshipers of mammon? When our sons have been prepared for business and have made their money, and when our daughters have married men of wealth, the one thing needful, will it not be too late for them to acquire a taste for the highest and best things money can procure; can we expect that a love of beauty in nature and art will spring into being, that our children will have proper standards of beauty if the seeds for such tastes and such love were not sown in youth?

The true object of government, whether it be that of a state or of a university, is to broaden the vision of countless individuals as to the meaning of life, and to increase their capacity to add to the sum of human happiness, not only by some positive accomplishment, but by the development of those keen sympathies which recognize all that is good in others while supplementing their weaknesses and retrieving their failures.

Finally, we have to recognize that in every field of endeavor the best men are largely self-taught. In the progress toward the predestined goal disclosed by the lifting mirage of the future, each chooses his own path and has his own peculiar problems to solve. As he advances further and further into the kingdom of truth he discards authority and flings off the fetters of tradition. It is only the mediocre man satisfied with a stereotyped career that can be fully equipped by any system of schooling for all the eventualities of his small and narrow life. What the school and college can do for all is to develop the capacity for true feeling and sound thinking. The medical profession must agitate in season and out of season for a high standard of physical capacity as a basis for intellectual achievement and for normal conduct. It must show its full appreciation of proper values by using every means to divert from its ranks those who have failed to demonstrate the possession of principle as well as of mental proficiency.

# SYPHILITIC SCARS OF THE SPIRIT

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As one's experience with syphilis of the nervous system becomes more extensive, one becomes more deeply impressed with the fact that the literature of the subject lacks adequate statement or description of manifestations of such infection or of the results of it. Indeed, the mental scars of syphilis have had very scant attention from physicians. The various ways in which general paresis displays itself, the dementia of syphilitic encephalitis and the mental accompaniments of syphilitic endarteritis have been discussed and described, but the minor mental and emotional changes attending cerebral syphilis, and particularly those that are permanent sequelae of such disease that has gone on to recovery, have not been properly recorded. The reason for it is that they are so variable, they are so slight, and, perhaps I may add, so nonpathognomonic. However, they often succeed in thwarting the victim's career, reducing him from a man of promise or a man of accomplishment to a man of no importance or a dependent.

The clinical display of syphilis of the nervous system is very different today from what it was twenty-five years ago. Indeed, syphilis of the nervous system is today different from what it was ten years ago. This may be because the syphilitic virus is less virulent than it was in former times, but probably it is because the disease is diagnosed more frequently and earlier than it was and because it is treated properly and adequately. "Properly" means with mercury and arsphenamin, and "adequately" not only until all clinical manifestations have disappeared but until the Wassermann reaction of the serum has remained negative for a long time. It also means that the medical profession by and large has come to a deeper realization that potassium iodid is not an antisyphilitic agency in the true sense of the term, but a medicament that is of inestimable service in dissipating the products of cell proliferation due to syphilis.

Now that ten years have elapsed since I began the use of arsphenamin and mercury in the treatment of syphilis of the nervous system, I have had abundant opportunity to witness cessation of the progress of syphilitic nervous disease. In some instances, fortunately, this cessation has been accompanied with functional restoration to a degree that approximates normal. I have also encountered many cases in which the syphilitic disease was conquered by the combined resources of nature and of art, but in which the functional restoration was not complete. When such disease is of the intracranial contents, the symptoms are more conspicuous than when they are of the intraspinal contents. For instance, a tabes may be brought to a standstill, and the only evidence of the syphilitic scar is sexual impotence or slight impairment of vesical tonus. On the other hand, syphilitic meningo-encephalitis or syphilitic encephalitis may after recovery leave a scar which displays itself in altered behavior of the patient which is apparent only to those who come in intimate contact with him, in slight impairment of his intellectual and emotional capacity, which, although slight, is enough to shape his career, turning it from success to failure.

## REPORT OF CASE

I have in mind the case of a young man of 26 who had made commendable progress in the mercantile world solely from his own effort and ability, and who was looked on by his friends as a man of promise. He left his house one morning of September, 1915, in apparently normal health. A half hour later he was brought home by a policeman and a stranger, who said they had found him lying in the street. He was not unconscious. He said he had been seized with sudden dizziness and had fallen. When he attempted to get up he was so giddy that he could neither preserve his station nor walk. For the next three days he complained in addition of nausea, and he frequently vomited. Gradually the dizziness disappeared, and at the end of two weeks he was able to sit up, and in four weeks he returned to his work. It was then noted that he was neither so alert nor so responsible as he formerly was, and he so failed to satisfy his employers that he was asked to absent himself from business and stay at home until he got well. From that time conspicuous mental symptoms developed. His family related that in addition to being drowsy and stupid, unresponsive and ambitionless, his behavior began to be very queer. He would drink while he was lying down, stuff his mouth full of food until he could not get any more in, attempt to swallow it without chewing it, urinate in his clothes, and throw his clothing or anything that he happened to pick up out of the window. In brief, his behavior was that of a man who had lost his mind. Unless he was specifically interrogated he made no complaint; then he would say that he felt "run-down" but that there was nothing else the matter with him.

The physician whose counsel was sought learned that he had married clandestinely six months before and that soon after that event his wife complained of a sore throat. When she went to a physician he diagnosed her disease as syphilis. Examination of the husband's blood revealed a ++++ Wassermann reaction, and he was put on mercurial treatment. He had received forty intramuscular injections when the symptoms that I relate developed. That is, he was under treatment when the first symptom indicative of meningeal involvement occurred. That symptom was paralysis of the facial nerve. Two months previous to the development of the symptoms noted, the right side of the face became immobile. It developed abruptly and involved all the branches of the nerve. After two or three weeks it gradually improved, but the remains of it were quite conspicuous when I first saw him. Six weeks after the attack of vertigo he made no complaint save that he was run-down. He admitted that he felt dizzy at times, but he had no headache, never saw double, and did not complain of stiff neck. He was inert, listless, unresponsive, neglectful of his appearance, and changed in manner and habit; but his conduct was no longer conspicuously bizarre. The only somatic signs of organic disorder of the nervous system were the residue of the facial paralysis, exaggeration of the tendon jerks, and an extensive, fanlike projection of all the toes when the sole of the foot was irritated. The Babinski great toe phenomenon was elicited on both sides, on the right more conspicuously and characteristically than on the left, and there was a right patellar and ankle clonus. His speech was somewhat indistinct and inebrious, and his answers were laconic; but there was nothing about his speech that suggested general paresis. His general appearance was that of a very ill man. He was emaciated and pale, and during the examination the skin was bathed in clammy perspiration. He weighed 98 pounds, his ordinary weight being 130. The laboratory tests were all corroborative of the diagnosis of basilar meningo-encephalitis, the spinal fluid containing about 150 cells. The following morning he was stuporous, and arousable with difficulty. When aroused he remained so only a moment, and then lapsed back into a condition as if he were overwhelmed by sleep. Indeed, his appearance and reaction were very much like a person in the beginning stupor of uremia or acidosis. Although he answered questions correctly, not infrequently he would stop in the middle of an answer and relapse into a stuporous state. He was able to get out of

bed unaided, to stand and to walk, but the latter was accomplished very insecurely. There was no trace of hemiplegia. The stuporous condition lasted about two weeks. At the end of that time he was confused as to time and place, and had practically no recollection of what had transpired from the time he entered the hospital. He gave a fairly comprehensive, sequential account of his illness up to that time. In reply to questions concerning his illness, he made the stereotyped reply, "Search me." However, he discussed the improvement that he had experienced, but without emotional accompaniment and without projection of plan or ambition. He read the papers and gave a fairly intelligent account of what he read, but he confined his attention to the comic sections and the sporting pages.

Gradually he began to display what might be called a triviality of conduct, a lack of responsibility, with no indication of gratitude for his recovery, no plans for the future, and no expression of desire to get home or to take up the activities of life again. After he had been under treatment for three weeks, during which time he had had two intravenous and two intraspinal injections of arsphenamin and daily mercurial inunctions, the Wassermann reactions of both the serum and the cerebrospinal fluid became negative, and the cells of the latter dropped to 11 per cubic millimeter. The only abnormality that it disclosed was slight globulin excess.

Gradually the patient's mental condition improved. He was no longer incontinent of urine or feces. He became more cognizant and observing of his surroundings; he took a keener interest in reading and diversion; he manifested more solicitude for the visits of his family, and displayed greater pleasure at such contact. His orientation of time and place became quite normal, his memory gradually improved, and his capacity for attention showed a greater awareness and retentiveness. He was neither depressed nor exalted, but displayed a general feeling tone that was not quite normal, though not particularly abnormal.

When he was taken into problems like mental arithmetic, in which he was formerly very alert, he became readily confused. His chief behavioristic phenomenon was untidiness of his person and of his room, which was very foreign to him when he was well, and unconcern for his future. He was then given a series of intravenous injections of arsphenamin and was discharged from the hospital seven weeks after his entrance. During that time he had gained 20 pounds. He went to a sanatorium, where he continued to receive antisyphilitic treatment, with both arsphenamin and mercury, for another six weeks.

Four months after he had come under observation he returned home, and he received no further treatment for three months. At the end of that time the serum Wassermann reaction was weakly positive, but the cerebrospinal fluid remained negative. His physician put him under treatment again and continued treatment for about a year. Altogether he received about thirty intravenous arsphenamin treatments, four intraspinal and scores of inunctions and injections of mercury.

### LATER HISTORY

I recently saw him again. More than three years had elapsed since he left the hospital. He related that a few weeks after he returned home, that is, six months after the beginning of the illness that is chronicled above, he obtained employment with a firm that sold automobile accessories and stayed with it two or three months, but as he did not get on very well he left and went with an automobile firm. This firm did not value his services, and after a short time he was again looking for employment. He secured a position with another mercantile firm, and remained with it six or seven months, but not making any progress he changed again and went with the General Electric Company, where he remained two years, during which time he never received an advance of wages. At a time when $50 a week was considered an acceptable wage for the average worker, he was earning only $21. To make matters worse, they gave him less acceptable work. This he considered an affront, and he decided to leave them; then he secured a job with another company, but to little financial advantage. He made no effort to return to the work in which he was trained, namely, the charge of a department in a large store. On being asked why he did not do so he replied that he was convinced he could not do the work satisfactorily, not because he was not well or because he had any difficulty in dealing with people, but, as he expressed it, "I can't think readily of the things to say that would facilitate the work that I would have to do." In other words, he realized that he had become a little indifferent, lacking in the mental elaboration that should be externalized in speech, inclined to be laconic in his answers, and silent. He thought that there were some people in the organization in which he had worked that might be interested in him and that they might give him an opportunity should he solicit it, but he had not been able to bring himself to do it.

He had no particular complaint, and he admitted that he felt well. Nevertheless, he had keen insight of his condition, as illustrated by his remarks about his previous position and by a realization that his wife had abandoned him because he was not able to provide for her. He also realized that his best efforts were not being translated into considerable money. His mother related that he was a little indifferent and that he had few social and no civic interests. His diversions were very simple and childish. Practically the only thing he cared about doing was to go to moving-pictures. He had not kept up with his friends, and he manifested very little inclination for social contact. It was not so much that he did not participate in ordinary pleasure and relaxation as that he had no initiative to plan them or to prompt them. He was not lacking in certain kinds of energy, for when he was out of a position, whether from his own volition or the desires of others, he set resolutely to work to find another; but the work he accepted was not consistent with his education or with his position in life, nor did he attempt to utilize former experience to help him to any position. On examination, the most striking defect was on the affective side of his consciousness. Memory and attention were but slightly impaired. He recalled the incidents of his illness, the room that he occupied in the hospital, where he went after leaving the hospital and how long he remained there, and a great many incidents of his illness; but when he attempted to particularize them, he displayed slight amnesia. On effort he had very commendable capacity for attention. For instance, when the paragraph of a newspaper was read to him, although he did not seem to be paying keen attention, nevertheless he repeated the substance of it without particular hiatus.

But his unfortunate experience had congealed him emotionally. Nothing appealed to him very much save the satisfaction of physical needs. His wife had forsaken him, the career in which he had made a success was closed to him, his mother manifested concern and despair, but they did not seem to touch him. He treated the situation and the prospective sterility of life for him as if they were matters of no importance. To all outward appearance and in casual contact he was quite normal. Spiritually, however, he was but an image formed in the likeness of his previous self.

Physical examination revealed no evidences of organic disorder of the central nervous system. The pupils, tendon jerks, the muscle tonus and the capacity for coordination were quite normal. There was no tremor, no disorder of speech, no disturbance of sense or sensibility. The only physical abnormality was a sluggish vascular system: bradycardia and poor peripheral circulation. Although he did not give the impression of vigor, he had regained his weight; and his appearance was that of a man in good health. His Wassermann reactions had been persistently negative for two years. His soul bore the syphilitic scar, and it will continue to bear it until he yields the spirit. It would be difficult to find a more instructive example of the curability of syphilis of the nervous system in the ordinary sense of the term. But what a miscarriage of therapeutic justice, what a mockery of our studied effort. Though cured, he is but the simulacrum of his former self.

### COMMENT

The experience is instructive, in that the encroachment of the central nervous system by the spirochete occurred while the patient was under antisyphilitic treatment by mercury; and more instructive is the experience that the symptoms yielded so promptly to intensive arsphenamin and mercury treatment. Although it is impossible to say how long the infection had been in existence when the meningeal symptoms displayed themselves, it is probable that it was more than a year. Had it not been that his wife showed a florid syphilis, there would have been no information concerning his affection.

That the burden of the pathologic process was borne by the meninges of the base of the brain is evidenced by the facial paralysis and by the vertigo; but that there was also inflammation of the cortical meninges is indicated by the stupor, the apathy, the disturbed cerebration and the sequelae.

The information furnished by examination of the cerebrospinal fluid tended to corroborate the diagnosis of predominant meningeal involvement. It is worthy of note that at no time did the patient complain of headache; nor were symptoms that are given much weight as important diagnostic accompaniments of basilar meningitis, such as nuchal rigidity, basilar and cervical tenderness and diplopia, present.

No satisfactory explanation can be given of the Babinski great toe phenomenon elicited in both feet during the first few days of his profound cerebral illness. The only explanation that can be given is that there was a meningeal involvement over the cortical motor areas. One would expect that in such a condition there would be evidences of motor irritation or of motor inhibition; but as these were lacking, it must be assumed that an associate edematous condition of the superficial cortex prevented manifestations of the one or the other. Indeed, the clinical picture which the patient presented at the height of his disease was not at all unlike that of certain cases of wet brain of alcoholism or of influenzal encephalitis, and it may legitimately be assumed that the dislocation of the patient's mental components was caused by a pathologic condition made up of inflammation and edema not unlike that which occurs particularly in the latter disease.

The chief object in calling attention to this variety of cerebral syphilis is to emphasize the fact that although the infection is thwarted and the patient regains what seems to be his health, he is left with a scar of his mind and his emotions which permanently cripples him to a certain degree. It is easy to measure this degree by psychometric test; but the most telling way of expressing it is to say that it has thrown him from the social, civic, marital, financial level that he had attained, which was a commendable one, to a much lower one at which he can barely support himself and can make no contribution to the welfare, the interest or the support of others. Had he been reduced another peg he might have become a hobo, a wanderer or a charge on his family or the community.

Such experiences as these teach us that syphilis of the nervous system is a curable disease; but the lesson that we learn from it is that the earlier the treatment is instituted the greater is the victim's chance of complete functional recovery.

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## ARSPHENAMIN REACTIONS

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In large hospital clinics where syphilis is treated with various arsphenamin preparations, reactions occur more or less frequently, depending on the care taken in preparing solutions, the purity of contents, the elapsed time between the making of the solution and its administration to the patient, the amount of arsphenamin given, operative technic and skill, and factors within the patient. While a given brand of arsphenamin might, through some circumstance, very rarely prove toxic, the precautions taken to make such possibilities remote (chemical, animal and clinical controls) usually mean that arsphenamin has to be discharged for want of evidence. Arsphenamin might have been guilty of causing some of the reactions on which this paper is based, but this could not be proved.

When directions are carefully followed in preparing the arsphenamin solution, and in administering it to the patient, if a reaction follows, then the cause of the reaction is attributable either to the brand of arsphenamin used or to the patient. Printed directions accompany each ampule of arsphenamin, whether it be diarsenol, arsenobenzol, salvarsan or arsaminol, and are specific and easy to understand; and it is laxness in following these directions that accounts for the greater number of reactions to treatment. When a trained and careful person prepares the solutions of arsphenamin, reactions will seldom occur in hospital clinics or in private practice.

### NECESSARY PRECAUTIONS

One should note any departure from the normal lemon-yellow color of the brand of arsphenamin being used, and then immerse the ampule in 95 per cent. alcohol for fifteen minutes to detect obscure cracks. Cracked ampules or ampules that contain discolored arsphenamin are to be rejected, the substance having become oxidized. It is a good plan to mark down the serial numbers of the ampules used in order to check up with the manufacturer in case the arsphenamin is suspected of being the cause of a reaction. One is further directed to prepare individual solutions, and when this is not practical, not to prepare more solution than can be disposed of within half an hour. Using the syringe-container method, and allowing six minutes for each 0.5 gm. of arsphenamin in solution, limits the number of ampules that may be used at one time to five. The sooner the solution is disposed of, the less danger of oxidation.

Using the directed technic for one brand of arsphenamin while preparing the solution of another will, in some cases, cause reactions. Salvarsan (Metz) calls for freshly distilled water of not more than room temperature; diarsenol requires warm, freshly distilled water; and arsenobenzol is to be dissolved in boiling hot, freshly distilled water. Salvarsan becomes oxidized when dissolved in hot water. The directions call for freshly distilled water or physiologic sodium chlorid solution, prepared from chemically pure sodium chlorid —not from table salt. It is directed that normal sodium hydroxid (4 per cent.) or 15 per cent. solution be used to neutralize and alkalize arsphenamin in solu-

tion. Faulty preparation with impure or altered sodium hydroxid, or contaminated distilled water, may cause reactions.

Neutralizing arsphenamin, which is a dihydrochlorid salt, requires a definite amount of sodium hydroxid to render it slightly alkaline and suitable for use. A large percentage of reactions resulting when technic is not strictly followed are due to hypo-alkalization, while hyperalkaline solutions, due to faulty measuring of sodium hydroxid solution, causes reactions at times. A graduated pipet or buret is recommended to be used, the certainty being a normal-sized drop and accurate measure. Arsphenamin is precipitated as a basic salt by sodium hydroxid; it requires a definite amount to redissolve the precipitate, changing the basic salt to a monosodium salt, the solution being just alkaline to litmus paper. On further addition of a definite amount of sodium hydroxid, a disodium salt is formed which is completely soluble in water. The basic precipitate and monosodium salt will cause reactions, the disodium salt in solution, properly diluted and filtered, being suitable for use.

All manufacturers agree that solutions should be of room temperature. Injecting too cold solutions into the circulation will induce chill reactions. Too rapid giving of the solution, particularly in high concentration, will cause reactions in some instances. One is advised not to give more than 0.1 gm. of drug (30 c.c. of solution) in two minutes; the gravity method is the one advised; the rate of flow is controlled by the size of the needle (No. 18 or 20 B. & S. gage) and the height of the column of fluid. The syringe-container method is favored by many operators, and while not as "fool proof" as the gravity method, an expert can handle difficult work with greater precision.

Giving too large a dose of arsphenamin at the beginning of a course of treatment accounts for some reactions. Lack of preliminary preparation for treatment —a laxative the night before, and a light breakfast four or five hours before operation—is sometimes a cause. Every patient should be given a careful physical examination to determine organic or functional impairments, as findings may limit or contraindicate arsphenamin treatment. When two or more reactions occur from a multiple ampule solution, in the majority of instances the fault will be found in the technic of preparing the solution, and the usual cause will probably be hypo-alkalinity.

### FACTORS ATTRIBUTABLE TO THE PATIENT

Both arsphenamin and the technic in preparing its solution having been excluded, factors attributable to the patient are to be considered. Tissue susceptibility to arsphenamin medication include allergic idiosyncrasy, an inherited dominant susceptibility to arsphenamin medication; anaphylaxis, protoplasmic sensitization from repeated doses; blood synthesis reactions, in which arsphenamin becomes altered or precipitated from causes not understood, or ascribed to excess of carbon dioxid in the blood, or faultily prepared arsphenamin solutions; and the nitritoid reaction, ascribed to the action of arsphenamin in destroying spirochetes and liberating large quantities of bacterial protein to which the tissues have become sensitized. The Herxheimer reaction is attributed to the stimulating activity of nonsterilizing doses of arsphenamin.

Reaction symptoms occur singly or in syndromes, while the injection is being given, soon after the patient leaves the table, or a few hours or days later. The most common type of table reaction is the vasomotor syndrome, usually manifesting dermal capillary flushing, dyspnea, coughing, nausea and subcutaneous edema, two or more symptoms being present. The vasomotor type of reaction has been ascribed by Pardo[1] and others to the vasodilating action of arsphenamin. Insufficient alkalization of arsphenamin solutions account for a large number of this type of reaction. Hirano[2] claims that arsphenamin anaphylactoid symptoms are due in many cases to a deficient epinephrin content in the blood resulting from sudden consumption after intravenous injection of arsphenamin, and from an inhibition of epinephrin secretion by the suprarenals. When repeated reactions of this type occur, preceded by a number of arsphenamin treatments without reaction, epinephrin deficiency as a possible factor causing the reaction is to be considered. Preinjection of epinephrin tends to prevent this reaction, as well as relieve the symptoms when it occurs.

Another type of reaction occurring infrequently, but liable to occur while the patient is on the table, is the "spine pain," characterized by the patient's complaining of stabbing pains in the lumbosacral region. The pain is usually intense; it is in most cases accompanied by vasomotor symptoms, and might be the result of vasomotor influence on various viscera, and registering on respective nerve centers in the spinal cord.

According to Kolmer and Yagle,[3] arsphenamin causes hemolysis, particularly when injected in concentrated solution, but is not so likely to do so when in weaker solution or when isotonic salt solution is used instead of distilled water. Hemolytic action of arsphenamin solutions is said to be increased by hyperalkalization. Dilute solutions of neo-arsphenamin (0.9 gm. in 90 c.c. or more of water) are claimed to cause hemolysis, while concentrated solutions (0.9 gm. in 30 c.c. or less of water) are not hemolytic.

### FUNCTIONAL AND ORGANIC IMPAIRMENTS

Reactions other than those due to anaphylaxis and blood synthesis arise from functional and organic impairments causing certain viscera to be more susceptible to arsphenamin medication. Neurologic reactions present the hysterical type, usually not attributable to arsphenamin but to psychophysical upsets, before or after treatment. Syncope, headache, vertigo, neuritis pseudo-epilepsy, and Herxheimer manifestations affecting special nerve centers occasionally arise, owing either to sensitization, vasomotor action, or activating syphilitic lesions. Reflex enuresis has been observed in two cases, immediately following arsphenamin treatment.

Aside from gastro-intestinal manifestations in anaphylactic reactions, there are symptoms that patients complain of at times, such as nausea, diarrhea, colic, anorexia and indigestion. They are not severe enough to be classed as true reactions, but may be termed incidents, being due, in most cases, to functional or organic impairments.

Dermal reactions sometimes occur, and appear to be due to too large doses of arsphenamin, dominant

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2. Hirano, N.: Nature of Anaphylactoid Symptoms Caused by Intravenous Injection of Arsphenamin, Japan Med. World, June 22, 1919.
3. Kolmer, J. A., and Yagle, Elizabeth M.: Hemolytic Activity of Solutions of Arsphenamin and Neo-Arsphenamin, J. A. M. A. **74**: 643 (March 6) 1920.

susceptibility, anaphylaxis, faulty elimination, blood synthesis, and the administering of toxic arsphenamin solutions. The eruptions appearing may be scarlatinal, maculopapular, or may simulate dermatoses, as pityriasis rosea.

"Arsphenamin jaundice" is a coined term applied to jaundice manifested by patients who have received arsphenamin medication. There are two forms, corresponding to the catarrhal or hepatogenous, and the toxic or hematogenous, the former being due to obstructive elimination arising from such causes as cholangeitis or hepatitis, which may or may not be due to arsphenamin treatment. The hematogenous form is probably due to toxic products of arsphenamin blood synthesis, toxic arsphenamin solutions, sensitized hepatic tissue, or overworked hepatic function, resulting in low-grade or toxic degeneration. Chronic hepatitis may be a contributory cause.

Jaundice following arsphenamin treatment usually occurs after a number of doses of arsphenamin have been given, and it has been observed that patients that show an exhausted or diminished tolerance, manifested by various reactions, are prone to have jaundice at a later period if arsphenamin treatment is carried on without a rest from treatment of one or more weeks. The usual case of arsphenamin jaundice clears up in from two to four weeks; the severe, toxic type of jaundice, while rare, is likely to be fatal.

Reactions to arsphenamin treatment are a warning signal that there is a cause to be found, and that a review of the patient's history, physical condition, the brand of arsphenamin used, and the technic of preparing the solution and administering it to the patient should be undertaken. It sometimes happens that treatment has been too prolonged, in persistently positive cases, and the tolerance to arsphenamin, and also to mercury, has become exhausted. In such cases a rest from treatment of one or two months does much to rejuvenate the patient.

### CLASSIFICATION OF UNTOWARD INCIDENTS AND REACTIONS

Sequelae arising from arsphenamin medication may be thus classified: the incidents, slight untoward symptoms occurring in patients with normal tolerance to arsphenamin, such as vertigo, palpitation, disturbances of taste and smell, or slight nausea; the reactions, usually occurring in syndromes, and causing discomfort and sometimes incapacity, which may be ascribed to allergic or acquired susceptibility to arsphenamin, functional or organic complications, or toxic arsphenamin solutions; the grave reactions (sometimes fatalities), such as dermatitis exfoliativa, toxic jaundice, hemorrhagic encephalitis, and gangrene; the accidents, such as thrombosis, phlebitis, and infiltrations about a vein.

With careful observance of all precautions in the administering of a properly prepared arsphenamin solution to a risk-free patient, if treatment is not too energetic, reactions may be reduced to a minimum, both in private practice and hospital clinics. Each patient, during a course of treatment, should be carefully observed as to individual susceptibility and tolerance for arsphenamin. Standard treatment may serve as a guide for the average case, but one must individualize to prevent reactions and best treat the patient.

1647 Beacon Street.

## SUMMARY OF BUREAU OF CHEMISTRY INVESTIGATIONS OF POISONING DUE TO RIPE OLIVES*

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In the study of poisoning due to ripe olives, a large amount of material representing this industry and its commercial product has been handled by the Microbiological Laboratory of the Bureau of Chemistry. Every phase of olive handling has been considered. The details of this work will be published elsewhere. A summary of the general findings may be of wider interest than the purely bacteriologic report. In the course of this investigation, 2,161 commercial containers have been examined. Of these containers, 560 were glass and 1,601 were tin. Cultures were made from the first 500 containers opened by us, including both tin and glass. Satisfactory odor and appearance were so uniformly accompanied by sterility that culture was subsequently limited to material which did not pass physical examination. In all, 618 containers were examined bacteriologically, and from these samples many different organisms were isolated, among them *Bacillus botulinus* in the following cases:

### ISOLATION OF BACILLUS BOTULINUS

1. *Bacillus botulinus* was isolated from seven glass jars of the same batch that caused the deaths of twelve persons in Ohio and Michigan. The actual olives involved in these two poisoning cases were not seen. Seven jars out of forty-six of the batch examined were shown to contain a highly virulent toxin. The organisms isolated from these jars when tested against antiserums proved to be Type A of Burke[1] and Dickson[2] which type is more commonly found in the Pacific Coast states. Type B, which is more common in the Eastern states and apparently also in Europe, has not been reported thus far in olives, although reported by Dickson as occasionally found in California.

2. The organism was found in bits of dried pimiento stuffing adherent to the inside of an empty glass bottle received from Kalispell, Mont. Stuffed olives from this bottle appear to have caused the death of five persons. Here again Type A was found.

3. *Bacillus botulinus* (Type A) was isolated from the interior of one of the olives from the glass jar connected with the New York poisoning cases.

4. The organism was isolated from the interior of an olive from the original glass bottle concerned in the deaths of seven persons at Memphis, Tenn. It was similarly isolated from two more olives which had been thrown into the yard and later recovered. All of these organisms were Type A. These olives were

* From the Microbiological Laboratory, Bureau of Chemistry, United States Department of Agriculture.
* The authors are indebted to Dr. L. T. Giltner of the Pathological Division of the Bureau of Animal Industry, U. S. D. A., for constant cooperation from the pathologic side in determining the toxicity of cultures and in typing them.

1. Burke, G. S.: Notes on Bacillus Botulinus, J. Bacteriol. 4: 555 (Sept.) 1919.
2. Dickson, E. C., and Howitt, Beatrice M.: Botulism: Preliminary Report of a Study of the Antitoxin of Bacillus Botulinus, J. A. M. A. 74: 718 (March 13) 1920.

part of a batch closely related to that concerned in the Ohio and Michigan cases.

5. Olive relish which recently caused the death of one person in Richmond, Calif., was examined by Dr. Fellers of this bureau and found to contain toxin capable of producing the death of experimental animals. Preliminary cultural examination indicates the presence of *Bacillus botulinus*. This sample was in tin.

### ODOR OF OLIVES

From the standpoint of the safety of the consumer, it is important to know that in all of the material infected with *Bacillus botulinus* examined by us the odor detected when the container was opened, or the odor of the olives when secured separately from the original container, was distinctly offensive. The offensiveness of the olives, if washed, iced or served in connection with highly flavored foods may be reduced to a minimum. It is recorded, however, that some of the consumers in the cases mentioned above detected the spoiled condition and refused to eat them. Others less acquainted with ripe olives or less keen in their sense of smell consumed the product. Some of them later recorded their objection to the fruit before they died. In only one case (New York) was there any expressed liking for the product.

The real difficulty seems to lie in a widespread lack of acquaintance with a normal odor of ripe olives. Many samples showing the whole range of quality from the highest grade to manifestly putrid material were examined and compared. Tabulation of the physical examination at the time of opening checked absolutely with bacteriologic results in the selection of unsound material. It is impossible to select toxin containing samples from other spoiled samples without animal experiments. These results, therefore, emphasize the necessity of careful examination at the time of opening the container, and of the destruction of any suspected material.

### STERILIZATION

Bacteriologic examination of the canned samples revealed the presence of many species of organisms other than *Bacillus botulinus*. Among these organisms were members of the colon group and many nonsporulating aerobes. Both our investigations of the time and temperature used in processing and the presence of these nonsporulating organisms in the containers indicate that the amount of heat applied was entirely inadequate for sterilization. Resistant spore-forming organisms when present, as they occasionally proved to be, withstand very much higher temperatures than were used in the majority of plants visited.

The practice of shipping olives and holding them at the factory either in water or weak brine in barrels or tanks appears to be fairly common in the industry. The salt content observed was never high enough to prevent the activity of micro-organisms. The fermentation of the tanks or barrels examined varied from the acid type without gas production to that of putrefactive decomposition with abundant gas. The odor given off from some of the barrels was very offensive. During this holding period, a barrel or tank of olives infected with any particular organism becomes contaminated throughout by its multiplication. The olives from such an original barrel or tank are graded first into several sizes, and then graded again according to color. One such originally infected container, therefore, may contribute infected olives to several of the final lots so packed. Sterilization of food carrying such extensive contamination with all sorts of organisms is very difficult.

There is another aspect to this fermentation aside from its possibilities of producing a poisonous product The odor of putrefaction already noted is generally recognized as evidence of a product at least partially decomposed. Decency demands that products so decomposed as to be offensive be eliminated from human food. Such products should be destroyed rather than cleaned up, canned and sterilized.

### CONCLUSIONS

1. More efficient sterilization should be employed in order to prevent further outbreaks of botulism.

2. Shipping or holding in brine solutions, if tolerated at all, should be so modified as to exclude any undesirable fermentations.

3. Olives from the time of picking until processed in the final container should be handled with the same degree of care and cleanliness as any other perishable food product.

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## DENTAL SURGERY AND ORGANIC HEART DISEASE

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In discussing this subject I do not intend to detract in the least from the brilliant results attained by dental surgery in the treatment of disease caused by focal infection about the teeth; rather, I mean to call attention to the very real danger which at times and under special conditions exists when radical treatment by extraction is attempted. Special reference is made to organic disease of the heart.

In a given case in which focal infection does exist about the teeth, together with organic cardiac disease, it is fair to assume, other causes being excluded, that the condition is caused or aggravated by the infection, and treatment for its removal should be instituted; but before this is done, certain results are to be anticipated. Are we going to stir up a latent infection in the heart and create an acute condition which may endanger the patient's life? This is possible. It has come to be accepted as proof of the accuracy of the diagnosis and the necessity of the operation that if the condition for which relief is sought by extraction of teeth is temporarily aggravated after the operation, the cause of the trouble has been determined and the procedure was justified. The deduction is logical. It is common experience to note that an arthritis or neuritis becomes acutely painful after the infection which causes it is, so to speak, stirred up. It is called a reaction, and is seldom thought of in connection with cardiac disease; but when this reaction takes place and affects a vital organ, such as the heart, results may be serious. Here the diagnostician in internal medicine should take a stand and be the judge when it comes to determining methods of procedure; and dental surgery will have to develop a technic which will reduce this danger to a minimum, as it is positively to be reckoned with.

Drainage of the infected area, such as an apical abscess, is the result which is desired; but this result, at times, and under certain conditions, is precisely what is not obtained, unless proper technic and after-treatment are employed.

After extraction, if the tooth socket is examined at any time during the first three or four days, it is found

to be filled with a firm clot of blood, which precludes drainage and affords an ideal soil for the rapid growth of bacteria; and the traumatism to the structures around the tooth greatly increases the opportunity for absorption. It is under such conditions that there is a rapid rise of temperature, increased pulse rate, and an acute attack or exacerbation of a chronic trouble, as exemplified by the history of the subjoined cases.

### REPORT OF CASES

CASE 1.—A thin, anemic woman, aged 42, came seeking relief for attacks of vertigo and general weakness, complaining also of having precordial pain and irregular heart action. Examination of the heart revealed a systolic mitral murmur, slight dilatation and an intermittent action, with nothing in the general history to account for the condition. The throat was negative. The teeth showed evidence of trouble. A hard swelling was found on the alveolar process of the jaw in the region of an impacted and partially unerupted third lower left molar. Pus was oozing out of a small opening on the top. The patient said that this condition had been present for five or six years. Roentgenograms of all the teeth revealed abscesses of the third lower left molar and second bicuspid. Extraction was advised, and the teeth were removed at the hospital the following day by a very competent man. Twelve hours later the temperature had risen to 102.5, and the pulse was 110; thirty-six hours later the temperature was 104, and the pulse 130. The tooth sockets were cleaned out and irrigated with an antiseptic solution, and in three hours the temperature had dropped to 100 and the pulse to 110. Twenty-four hours later another rise of temperature and pulse rate took place. Irrigation of the tooth sockets was again resorted to, with the same results. Thereafter irrigation and cleansing by antiseptic solutions prevented a further rise in temperature and increase in pulse rate.

On the fifth day after extraction, the heart trouble had become worse, the pulse rate remained high, the intermittent heart action was more pronounced, the murmur was more audible and the patient was very weak, being obliged to remain in bed for two weeks under treatment directed to the condition of her heart.

CASE 2.—A woman, aged 64, had an exploratory laparotomy performed for suspected recurrent carcinoma in the pelvis, hysterectomy having been performed three years previously for cancer of the uterus. Examination before operation disclosed hypertrophy of the heart, the systolic blood pressure being 140, and the diastolic, 110. A slight systolic murmur was present at the apex. The patient remained in bed in the hospital for a week before the operation. Laparotomy was performed, but it amounted to nothing more than an exploration, and I do not think it could be held responsible for the results, as the patient recovered from the short ether anesthetic and operation in a few days. On the eighth day after the operation she requested to have two lower second bicuspids extracted, saying that they were sore and had been giving her trouble for a long time. Extraction was done under local anesthesia. Twenty-four hours after extraction of the teeth, the temperature rose to 101, and the pulse to 125. Local treatment, as in the previous case, improved the symptoms somewhat. During the next twenty-four hours the pulse became weaker and more irregular, but the temperature did not rise above 100. The mitral murmur became more audible, the systolic blood pressure began to fall, the pulse rate and general weakness increased, and the patient died of dilatation of the heart at the end of the third day.

### COMMENT

Other and as typical cases can be reviewed from private practice and from the records of St. Agnes Hospital, where severe cardiac actions have occurred after the extraction of infected teeth.

It is not to be presumed that all patients with cardiac diseases are necessarily poor risks for extraction; but when the focus of infection to be eradicated is the probable cause of the heart trouble, the possibility of making matters worse must be borne in mind. No doubt valvular disease in well compensated hearts, especially in young persons, cannot be considered dangerous; but in older persons in whom the myocardium is degenerated, accompanied by valvular disease, when the energy index is low and cardiac decompensation is imminent, such hearts show that they are beginning to break under their load, and in such cases it behooves us to make haste slowly.

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## ACUTE MIDDLE EAR INFECTIONS IN CHILDREN

### FROM THE STANDPOINT OF THE PEDIATRICIAN *

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Among infants and children, acute ear infections take rank in number and importance only second to respiratory and gastro-intestinal disturbances. They are a common occurrence in affections of the upper respiratory tract, and frequently prove formidable complications in scarlet fever and measles. In private practice among children, hardly a day passes during the winter season without one's coming across an acute ear inflammation, and in hospital practice it is not an uncommon thing to have to incise two or three drums daily in the infants' wards during the season of respiratory infections. Being acquainted with this susceptibility to ear infections, the pediatrician is always on the lookout for ear inflammations, and consequently is likely to see their development from an earlier stage than does the otologist. Routine examination will frequently reveal the ear inflammation before the baby has shown any manifestations referable to the ear by the mother or the nurse.

As to symptoms, complaint of pain in the ear, if present, is of course important; but young infants do not well localize their pains, and frequently a baby will cry and put his hand on the abdomen, and complain of pain in the stomach, when examination will reveal a bulging drum as the cause of the pain. Rolling the head or putting the hand to the ear are suggestive, but often they have no significance. Absence of any complaint of pain or even of general restlessness is no proof that the ear is not inflamed. Temperature elevation is nearly always present, but this also, like pain, may be absent even when the drum is bulging. Tenderness in front of the ear is a very reliable sign, but this too is occasionally lacking even when there is high temperature and bulging of the drum. Moreover, many children deny tenderness, in spite of the involuntary wincing of the mouth. Stiffness of the neck is occasionally present even without enlarged lymph nodes under the mastoid muscle and without mastoiditis. To sum up the indications of middle ear disease, a bulging drum is the only diagnostic sign. On examination, retraction of the drum and in addition some redness is frequently the first sign of inflammation in the rhinopharynx and often confirms a suspicion of acute rhinitis as cause for fever up to 102 or 103 F. when there is as yet no running or stuffiness of the nose. The next sign of ear involvement is some red-

* Read before the Section of Otology, New York Academy of Medicine, Feb. 13, 1920.

ness along the malleus, and the next, some fulness and redness of Shrapnell's membrane. These signs are present so commonly with head colds in children, and subside so readily, that this small degree of otitis can be considered a very common accompaniment of acute rhinitis.

The next signs that appear mean an otitis media, namely, redness and bulging of the drum membrane, first behind and later in front. Occasionally the drum looks only gray, owing to thickened epithelium, which must be removed to get a view of the drum itself. The retraction meanwhile increases, and the appearance of the drum is that of a small red ring or doughnut. When accompanied by a high temperature, these signs are sufficient justification for incision of the drum; but by far the larger number of such cases will subside in a day or so if the nostrils are treated by a weak epinephrin solution, and hot irrigations of the ear are employed. I find that most otologists incise such drums, and the practice is undoubtedly a good one, for such an ear will frequently return to normal more quickly after being incised than if not opened. I have seen this in many cases when both ears became inflamed successively and in which the first one was incised. I appreciate fully the dangers of fulminating mastoid, and am aware that the knowledge and experience of such cases is the reason why the otologist practically always makes an incision when he sees a bulging drum. And yet the making of an open wound with the dangers of additional infection from the outside has seemed to me a procedure to be avoided, if possible without risk to the child. It is only when the temperature is high, the pain acute and the bulging marked that I have deemed it best to incise at once. The infrequency of mastoid complications and the very satisfactory results of conservative treatment are my justification for awaiting further indications than those of the day of onset. If the tenderness elicited by pressure on the tragus increases, if there is tenderness of the tip of the mastoid, and if the temperature remains high after twenty-four hours and the bulging persists, incision is necessary.

The paracentesis should be done under anesthesia, preferably chloroform, though an exception may be made to this rule if the patient is an infant and only one drum is to be incised. The incision should be a J or U shape, and should be carried well upward. Irrigation with hot boric acid solutions immediately after incision is of advantage, and it is always satisfactory to hear the child gulp or swallow during this irrigation, as this shows a free opening through the drum, with passage of the irrigation fluid into the throat. The temperature, the pain, the tenderness in front of the tragus, and the tenderness of the tip of the mastoid—if that has been present—should all subside after two or three days. It is quite common, however, for the temperature to remain elevated until the discharge becomes purulent. This may be two or three days after the incision.

Mastoid involvement has been, in my experience, a very infrequent complication of middle ear disease; among infants in hospital practice not more than 1 per cent. and in private practice not more than 2 per cent. There is, however, great variation in different years. For several years I saw not a single case in private practice, the next year six or eight, and then a number of years only one or two cases. The rarity of mastoid complications in infants' wards of hospitals is worthy of comment, not more than three or four a year occurring among hundreds of cases of acute otitis.

During the month of January, 1920, there were in the children's wards of Bellevue Hospital 248 admissions; eleven patients had primary otitis media and thirty-one had otitis secondary to other conditions, mostly of the respiratory tract. There were among these respiratory conditions seven cases of bronchopneumonia, six of bronchitis, four of acute pharyngitis and two of lobar pneumonia. During the year 1919 there were only two cases of mastoiditis among 400 cases of otitis media. It is a common observation that in cases of bronchitis or bronchopneumonia the complicating otitis media occurs usually from four to seven days after the onset of the primary disease. Often in cases of bronchitis the ear will become involved after the temperature of the acute bronchitis has subsided to normal. In these cases it is probable that the continued coughing of the early convalescent stage causes an infection of the eustachian tubes.

The otitis that complicates measles is far more likely to result in mastoiditis than we have been taught to believe, and is almost as serious as the otitis complicating scarlet fever.

The chief reliable sign of mastoid inflammation is sagging of the posterior superior quadrant of the drum with the adjacent wall of the canal. Tenderness above the tip on a line directly behind the meatus at the site of the mastoid emissary vein, and tenderness of the upper part of the mastoid in the region of the zygoma are very important if they can be elicited. Other suggestive signs are a profuse discharge or the sudden cessation of a profuse discharge. In little babies, and occasionally in older children, an edema over the mastoid process is important. It should be emphasized that vacillations of temperature without the canal signs are not reliable, though if these temperature elevations are continued and unexplained by pneumonia, pyelitis or by gastro-intestinal disturbance, they must be regarded as pointing to mastoid involvement. If successive blood counts show an increase in the number of polymorphonuclear cells and in the total leukocyte counts, they are also valuable; but single blood counts are of little importance since the blood in children is susceptible to a polymorphonuclear and total leukocyte increase.

To my mind the indications for the mastoid operation are a persistence of the signs already mentioned, in spite of free drainage through the wide incision in the drum. It is manifest that if the inflammation is not subsiding there must be increasing destruction of the mastoid cells, and the only method of cure is by posterior drainage through the mastoid bone, together with clearing out of all the cells and bony tissues that are infected.

Sinus thrombosis is so exceedingly rare in my experience that I can say very little about those signs. In several instances, however, this diagnosis has been suspected chiefly because of a marked septic type of the temperature curve. It cannot be emphasized too often that marked vacillation in the temperature is a most unsafe guide to either mastoid disease or to sinus thrombosis. The temperature in children is so readily changed by slight causes that there must be localized evidence in order to make a diagnosis. Particularly, one should be on the lookout for pneumonia, pyelitis, tonsillitis, inflammation of the lymph nodes in the neck, and gastro-intestinal disturbances. During epidemics of grip it may be impossible to find any local condition

to explain the temperature variations; but without definite evidence of trouble in the mastoid or in the signs as determined by positive blood cultures, such diagnosis should not be made. In a baby, aged 19 months, sinus thrombosis was suspected but did not exist, and in another instance sinus thrombosis was suspected, probably because of tenderness along the mastoid muscle. This tenderness was an inflammatory reaction in the edge of the muscle extending down from the mastoid process, which had been opened.

Of actual labyrinthine disease complicating mastoiditis I have seen only one case; it is, of course, very rare.

I have said nothing with regard to operations of mastoid and sinus, because they belong distinctly to the realm of the otologist. My plea to the general practitioner and to the pediatrician with regard to ear infections in children is that careful routine examination of the ears be made in all cases in which fever is present. It cannot be emphasized too often that to the man who treats children, the otoscope is just as necessary as the stethoscope.

113 East Sixty-First Street.

## USE OF MERCUROCHROME-220 AS A GERMICIDE IN OPHTHALMIA NEONATORUM

### A PRELIMINARY REPORT

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Since the appearance of the article by Young, White and Swartz,[1] calling attention to the germicide dibromoxymercuryfluorescein (mercurochrome-220), showing its penetrating power as well as its germicidal action on the gonococcus, with its slight irritability, we have used it in four cases of gonococcal ophthalmia neonatorum with exceedingly satisfactory results:

CASE 1.—M. D., aged 3 weeks, whose eyes had discharged pus since birth, the only treatment having been boric acid irrigations, was brought to the dispensary of the Baltimore Eye, Ear and Throat Charity Hospital for treatment, Jan. 6, 1920. Examination revealed the typical acute gonorrheal conjunctivitis with swollen lids and purulent secretion, the cornea being clear. Smears showed many pus cells containing gram-negative diplococci. A 2 per cent. solution of mercurochrome was freely instilled in each eye at the hospital, and boric acid irrigations were continued at home as before.

January 7, the lids were not glued together, there were no crusts at the margins, the edema was subsiding, and there was only a small amount of pus in each conjunctival sac. Smears were taken and no gonococci were found. The eyes were again flushed with the 2 per cent. solution, and boric acid irrigations were continued.

January 9, edema of the lids had disappeared: no free pus and no gonococci were found in smears. The eyes were again flushed with the 2 per cent. solution.

January 10, there was no purulent secretion, and a smear was negative. The 2 per cent. solution was again instilled. Although instructions were given to return in two days, the patient was not observed again.

CASE 2.—A. T., aged 11 days, appeared for treatment at the Baltimore Eye, Ear and Throat Dispensary, Jan. 6, 1920, being brought by an aunt who said that the child was delivered by a midwife and no drops were used. Its eyes became sore three or four days after delivery. Examination revealed acute purulent ophthalmia neonatorum with edema of the lids and much free pus, the right lid being more swollen than the left. The corneas were clear. A smear showed numerous pus cells with gram-negative intracellular diplococci. A 2 per cent. solution of mercurochrome was used at the hospital after cleansing with boric acid, and a similar solution was given the aunt with instructions as to the method of use every two hours.

January 9, the left conjunctival sac was almost entirely free from pus, and edema of the lids was much less, the right lid being still swollen. A purulent secretion still showed gonococci, but there was much less secretion and the organisms were fewer. The treatment was ordered to be continued.

January 12, the patient was admitted to Sydenham Hospital with a diagnosis of acute indigestion, and died, but no connection was attributed to eye treatment by the physician in charge. The note in reference to the eyes was that "they were almost free from inflammation."

CASE 3.—B. R. was born in Maryland Lying-In Hospital, Jan. 10, 1920, and Credé's method was employed. Nine days later the lids became edematous, with purulent conjunctivitis which showed an abundance of gonococci. A drop of 1 per cent. silver nitrate solution was instilled into each eye with cleansing, and 10 per cent. argyrol was used every three hours.

January 21, all the symptoms were exaggerated, the discharge being very profuse and the lids edematous, although the cornea remained clear. At 5 p. m. on this date a 2 per cent. solution of mercurochrome-220 was used, and was continued every three hours in place of all other treatment.

January 22, the eye showed marked improvement, the edema of the lids and the secretion both being lessened.

January 23, there was no edema of the lids, but there was considerable serous discharge: no gonococci were found in smear.

January 24, there was a slight serous discharge.

January 26, the patient left the hospital. The secretion was very slight and no gonococci were found.

February 4, the mother reported that the child's eyes were normal.

CASE 4.—A. D. had a smear taken from the eyes two days after birth, as the mother had been under treatment, although the baby's eyes showed no inflammation. The smear showed the presence of gonococci. Two per cent. solution of mercurochrome was instilled every two hours. Three days later no gonococci could be found on staining a smear.

### COMMENT

It is not necessary in a report of this character to go into the chemistry or the experimental data of this new germicide, as they were thoroughly treated in the article referred to; nor do we present this as a new sure cure. Rather do we wish to call our colleagues' attention to its application in eye infections, especially infections with the gonococcus. While we have used it in some other infections, it has not seemed as yet more efficacious than the older remedies.

To be sure, these infants frequently improve on cleansing treatment alone, but there seemed a very marked improvement on using the new remedy. The crucial test will come in the cases of gonorrheal conjunctivitis in the adult. While we did use it in the last stages of one case with seemingly marked improvement, we do not feel justified in including it in this report.

A 2 per cent. solution can be used with impunity and with only a slight burning effect for the first few seconds. Though it is rather disagreeable to use on account of the red stain, it is no more objectionable

1. Young, H. H.; White, E. C., and Swartz, F. O.: A New Germicide for Use in the Genito-Urinary Tract: "Mercurochrome-220," J. A. M. A. 73: 1483 (Nov. 15) 1919.

than argyrol, and will not produce a permanent stain, as occasionally happens with the silver preparations. In the cases reported there was a marked improvement after its use was begun, and apparently a much more rapid convalescence.

## THE METABOLISM OF A DWARF

STUDIES IN METABOLISM: I

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The metabolism in this case is recorded because in the first place it is somewhat unusual, and in the second place no other studies on the metabolism of dwarfs of the same age have been made.

### REPORT OF CASE

F. D., a boy, had been under the observation of the overseers of the poor, and had always been placed in excellent homes. The family history was unknown. He was very small and thin in spite of the fact that he had had plenty of good food and outdoor exercise. He had had none of the infectious diseases. At 3 years of age he was much undersized, and is said not to have gained much in weight or size since that time. When 7 years old he weighed, when dressed, 12.6 kg. (27 pounds, 5 ounces) and was 91.5 cm. (36 inches) tall, the normal weight for the age being 21.9 kg. (48 pounds, 1½ ounces) and the height 114.3 cm. (45 inches). His physical examination, aside from his small stature, was normal. A diagnosis of a dwarf boy with rickets was made. His basal metabolism is given in Table 1. The figures represent the basal metabolism without food. His temperature was 98.8, and he had had nothing to eat since midday.

Table 2 shows the results of his metabolism studied during two active periods while fasting and with a temperature of 99.7 F. He weighed at this time 12.93 kg.

The recent work of Benedict and Talbot,[1] about to appear in a forthcoming publication of the Carnegie Institution of Washington, gives, for the first time, the complete curve of the basal metabolism of children from birth to puberty, and makes possible comparisons which in the past were not feasible.

TABLE 1.—BASAL METABOLISM, MAY 17, 1918

| Carbon Dioxid Produced Calculated to Hour Basis, Gm. | Heat Produced per 24 Hours | | | | | |
|---|---|---|---|---|---|---|
| | Total Calories | Per Kilogram, Calories | Per Square Meter Body Surface — Lissauer, Calories | Per Square Meter Body Surface — Du Bois, Calories | Average Pulse Rate | Relative Activity |
| 11.22 | 777 | 58 | 1,335 | 1,257 | 104 | I asleep |
| 11.32 | 784 | 58 | 1,347 | 1,269 | 105 | I asleep |

The basal figures found for F. D., as compared with the normal studied by us, showed that his total metabolism for twenty-four hours was 780 calories against an average of 900 calories for normal boys of the same age. Although his metabolism was slightly diminished, it was almost within the variation of the normal. When the total calories of F. D. were compared with the total calories of normal boys of the same weight, it was found that he was producing more calories than the average, the total calories for F. D. being 780 against 675 calories for normal boys. This is slightly above the possible variation from the normal.

His metabolism, studied from the point of view of unit of body weight, was found to deviate markedly from the normal. His calories, 58 per kilogram, against the average for normal boys of the same age, 40 calories per kilogram, show an increase of 45 per cent., and his metabolism per kilogram of body weight an increase of 13.7 per cent. above the normal. It is evident, then, that the intensity of his metabolism is greater for each unit of body weight than that of a normal boy. His variation from the normal is striking, and although possibly characteristic of certain types of dwarfs, it may be due to the fact that there is very little fat on his body. As might be expected, his metabolism per unit of body surface was 12 per cent. higher than that of normal boys of the same age, and 11 per cent. higher than that of normal boys of the same weight. This is probably because of the relatively large amount of active protoplasmic tissue and the absence of the inert blanket of body fat, as well as the relatively increased amount of body surface.

TABLE 2.—METABOLISM WHILE FASTING, MARCH 25, 1918

| Carbon Dioxid Produced Calculated to Hour Basis, Gm. | Heat Produced per 24 Hours | | | | | |
|---|---|---|---|---|---|---|
| | Total Calories | Per Kilogram, Calories | Per Square Meter Body Surface — Lissauer, Calories | Per Square Meter Body Surface — Du Bois, Calories | Average Pulse Rate | Relative Activity |
| 16.15 | 1,051 | .. | ..... | ..... | 122 | IV |
| 19.56 | 1,273 | 98 | 2,245 | 2,118 | 130 | III |

### COMMENT

There is no evidence in the physical examination or clinical status of this boy to explain his failure to grow or to prove that he suffered from any disturbance of the glands of internal secretion. Intellectually he was said to be up to other boys of the same age. He had no disturbance of digestion, and his dwarfism may have been merely another evidence of infantilism. His metabolism showed that he did not belong to the class of individuals who have diminished glandular secretion, as in cretinism, myxedema, or hypopituitarism, in which there is a lowered metabolism.

The maximum number of calories used by him shows that when he was restless, even while lying flat in the respiratory chamber, his metabolism would increase nearly 50 per cent. It is evident, of course, that with more active exercise, his metabolism would have increased very much more. It is fair to assume, therefore, that his protoplasmic mass must work at a greater rate of speed than is the case in children who have deficient glandular secretion. It is possible that his increased metabolism might be due to excessive activity of some gland of internal secretion for which no clinical sign was found.

The result of the metabolism studies on this boy show that in order to make him gain in weight he must receive as many calories as a normal boy of the same age, and a great many more calories per kilogram than a normal boy of the same age or weight. Undoubtedly he will require at least twice as many calories as the basal metabolism gives, or approximately 120 calories per kilogram. This is similar to what was found to be true in atrophic infants who required from 160 to 180 calories per kilogram before they gained.

311 Beacon Street.

1. A preliminary communication on this work (Benedict, F. G.: Energy Requirements of Children from Birth to Puberty) appeared in the Boston Medical and Surgical Journal **181**: 107 (July 31) 1919.

**Differential Diagnosis.**—In appendicitis beginning suddenly there is a rise in temperature; in acute perforation of the stomach or duodenum the temperature falls.

# THE SUBOXIDATION SYNDROME IN CHILDHOOD

CHARLES GILMORE KERLEY, M.D.
AND
LOUIS BERMAN, M.D.
NEW YORK

The condition which we have designated as the "suboxidation syndrome" is found with few exceptions among the offspring of the well-to-do. The forebears of the children presenting this syndrome are usually those who have lived indoor occupational lives for two or more generations—those who have been occupied with intellectual pursuits and not by manual labor.

*A child with the suboxidation syndrome is one whose physical functions are habitually below the normal.* He may be overweight, or of average weight, but he is usually underweight. There is a lowered capacity in endurance, and the emotional control is defective. As a rule, the child is precocious and mentally overactive, and possesses much nervous energy. One of the striking features is a dryness of the skin with a tendency to erythema and mild eczema. Patchy areas of inflammation are particularly prone to appear about the mouth. Perspiration is scanty, and the child rarely perspires except on very hot days, and then only under active exercise. The hands and feet readily become cold in cold weather, and this feature is complained of by the parents. They feel low temperature keenly. Extra heavy outdoor garments are required during the winter months. A moderate anemia is present in most cases. The appetite is often capricious, and constipation is the rule.

One of the frequently encountered features of this syndrome is a marked tendency to afebrile rhinitis and bronchitis. The child is scarcely free from one attack when another supervenes. There is a chain of these respiratory affections throughout the winter. The "colds" are sufficiently severe and frequent in occurrence to interfere seriously with the activity of the patient, and much time is lost in school and outdoors. It is rare to find a patient of this type who has not had both tonsils and adenoids removed, with little or no benefit.

As a class they are rather immune to infection of the respiratory tract, although pneumonia and infectious bronchitis may, of course, occur. While they show a certain resistance to bacillary affections of the respiratory mucous membrane, they quite frequently are subjects of protein sensitization; and bronchitis, when it occurs, is likely to be of the spasmodic type.

Another feature of the syndrome is the tendency to attacks of recurrent vomiting. The child vomits once or repeatedly for a few hours or a day or two. The vomiting seizures may have occurred at fairly definite intervals for several months or years.

In some of these patients, transient skin rashes or eczema may be the predominating manifestation that brings him to us; or it may be because of the anemia or that he is underweight or that he has not gained in height for a period of several months.

Others will give the history of an elevation of the temperature, lasting one or more days, occurring at fairly regular intervals, without other manifestations than those of heavy breath and a coated tongue.

Not all cases show an identical train of acute manifestations. In one respect, however, these children are very similar: They have a defective metabolism for the soluble carbohydrates and for the hydrocarbons, particularly for cow's milk fat in the amount that we have accustomed ourselves during the last few decades to give to children.

## ILLUSTRATIVE CASES

CASE 1.—A boy, aged 3 years, weighing 29 pounds and without physical abnormality, had been subject to recurrent attacks of elevation of the temperature since the age of 1 year. They occurred about every two months. There was loss of appetite, coated tongue and listlessness, with a temperature of from 101 to 103. There was rarely vomiting, the fever periods lasting from three to five days. The skin showed scattered areas of erythema. He was put on a diet free from cow's milk fat, and sugar. During the next eight months there were no further attacks of illness, and he had gained 3½ pounds in weight and 2½ inches in height.

CASE 2.—A girl, aged 6 years, who weighed 47½ pounds and who was without physical abnormality, had a habitually coated tongue and habitually poor appetite. Meal times were a trial to the other members of the family. In disposition she was irritable, her complexion was sallow, the skin was dry over the back of the neck, where there was persistent erythema. There were patchy areas of eczema about the mouth, causing considerable disfigurement. She was subject to frequent catarrhal colds. One followed the other so rapidly that it was difficult to say when one was finished and another began. Tonsils and adenoids had been removed without benefit. It was with concern that the parents looked forward to the approaching winter. She was given a diet from which sugar was largely excluded, enough being allowed to make the food palatable. Butter was forbidden. One pint of skimmed milk was allowed daily. Aside from these restrictions, the food given was that of any well child of her age. After two months under this management she weighed 53 pounds, a gain of 6¾ pounds. There had not been a day's illness. The tongue was clean, with no trace of eczema. She was happy and good natured. During the last six months there have been only two slight colds, and the skin remains clear.

CASE 3.—A girl, aged 8 years, weighing 51½ pounds, gave the history of early eczema and difficult feeding, and "had always been on a diet for her skin." The immediate occasion for the consultation was the occurrence of vomiting attacks at intervals of from four to five weeks. The attacks usually lasted from one to two days, during which time the vomiting occurred frequently. The tongue was much coated at this time, and there was a moderate elevation of the temperature—from 100 to 102. After a seizure she was left very weak, and required several days for recuperation. The heart and lungs were normal. The blood showed 50 per cent. hemoglobin, the red cells, 4,700,000. The urine was entirely negative. She had been taking 1 quart of milk daily in addition to that used on cereals and in puddings. Sugar had been allowed with the customary freedom. She was put on the usual mixed feeding suitable for a child of her age, with restriction to skimmed milk and no sugar. After ten weeks and four days she weighed 56 pounds, a gain of 4½ pounds. The mother reported that during the interval there had been no vomiting and no fever; the tongue remained clean and the bowels regular. This case has been followed for five months without a return of the vomiting seizures.

CASE 4.—A boy, aged 7 years, with a height of 47½ inches and a weight of 42 pounds, came to us, Jan. 2, 1920, because of "frequent colds, persistent wheezing in his chest and a cough which was relieved only by warm weather." The condition had existed for three years, with a particularly severe cough since the preceding November. The patient was thin, pale and weak. The appetite was poor. Food had to be forced. The blood showed 70 per cent. hemoglobin and 4,200,000 red cells. The urine was negative. The heart action was rapid and the heart sounds were normal. Examination of the lungs revealed mucous and sibilant râles fairly evenly distributed. There was slight bronchial spasm. The tonsils and adenoids had been removed. There was no eleva-

tion of the temperature. Acting under medical orders the child had been generally supplied with sugar, cream, milk and butter with the idea of improving his physical condition. Our treatment was to order a general mixed diet largely sugar-free, 1 pint of milk daily, and very little butter. The further instructions were that the boy should remain in bed until 10 a. m. each day, rest one and one-half hours after the midday meal, and retire at 7 p. m.

One pint of a vichy water was to be drunk daily. He was allowed to go outdoors, and no cough mixtures were given. There was a betterment of the cough in three days, with a gradual cessation and entire disappearance in eighteen days. Fourteen days after our first examination the bronchitis had entirely disappeared. After six weeks under treatment, the weight was 47 pounds, a gain of 5 pounds, with a marked improvement in the general appearance of the patient, and an entire absence of cough. The appetite was most satisfactory, and foods such as vegetables and cereals, which the patient previously had to be coaxed and forced to eat, were taken eagerly. The child had remained free from the cough for ten weeks.

### COMMENT

A noteworthy feature in nearly every case treated has been the improvement in appetite and the marked gain in weight as soon as the fat and sugars which had been given above the capacity of the patient had been removed from the diet. Foods such as vegetables and cereals which had been taken with reluctance and then in small quantities are often taken eagerly.

The management of children presenting the suboxidation syndrome suggested in the foregoing brief case histories will appear in detail in a later publication.

An examination of the urine in a certain percentage of these cases shows a slight but constant acetonuria on an ordinary diet, even when the patients are apparently well. Those subject to attacks of vomiting show a marked acetonuria during the attack. A great majority exhibit a marked acetonuria with acute febrile illness.

A study of the blood by one of us (L. B.) of the patients we have come to classify as "suboxidation syndrome," when apparently well, has shown a variable hyperglycemia varying from 130 mg. of glucose per hundred c.c. of blood as the lowest, to 280 mg. per hundred c.c. as the highest, in a series of sixty-seven cases, the average being 163. Of these, twenty-seven presented themselves with recurrent vomiting, sometimes alternating with bronchitis or eczema as the predominating symptom, and showed an average blood sugar of 175 mg. per hundred c.c.; three who came for recurrent pruritus averaged 170 mg. per hundred c.c.; eleven who exhibited eczema as the predominating symptom averaged 148 mg. per hundred c.c.; two who came for recurrent attacks of fever, with coated tongue and acetone breath, averaged 162 mg. per hundred c.c.; twenty-three who had frequent colds and bronchitis as their chief complaint averaged 160 mg. per hundred c.c.

The blood sugar of ninety-two children not belonging to this group was also examined. These varied between 80 and 125, averaging 105. They included those who came for examination and feeding, for malnutrition, adenoids, intertrigo, enuresis, simple anemia, constipation, proteinogenous asthma, obesity, chronic nephritis, essential headache, chronic cervical adenitis, anorexia, acute bronchitis, tics, nonepileptic convulsions, recurrent vomiting with dilated stomach and redundant sigmoid, recurrent vomiting, frequent colds, asthma due to enlarged tonsils and adenoids relieved by operation, migraine, urticaria, mucous colitis, flat-foot, chorea, seborrheic eczema of the scalp, cardiac disease, tetany, pylorospasm, gonococcus vaginitis, epilepsy, habit spasm, chronic otitis media and enlarged tonsils.

We have examined four cases belonging to the suboxidation syndrome group characterized by attacks of vomiting at the height of the attack. They showed a hypoglycemia, the figures being 80, 85, 85 and 70 mg. per hundred c.c. One case of bronchitis with bronchospasm examined in the attack had 75 mg. sugar per hundred c.c. of blood.

Ten cases classifiable clinically as belonging to the suboxidation syndrome group have not shown any definite hyperglycemia at the time of examination. Of these there were four cases of frequent colds, with an average blood sugar of 105 mg. per hundred c.c.; two cases of eczema averaged 97; three cases characterized by recurrent vomiting averaged 106, and one of recurrent diarrhea showed 105. We believe that a study of their sugar tolerance would show it impaired, and we hope to make a study of their blood sugar curve after the ingestion of sugar.

### DETERMINATION OF BLOOD SUGAR

The method used to determine the blood sugar was an adaptation of Benedict's [1] modified picric and picrate method to finger blood along the lines followed by Epstein in applying the original picric acid method:

Of the blood, 0.2 c.c. was obtained from a finger and was immediately mixed with 0.8 c.c. of distilled water, the blood laking after a little shaking. To this, 1.5 c.c. of Benedict's picric acid picrate reagent was added drop by drop and thoroughly mixed. The precipitated proteins were then thrown down by centrifuging. Of the supernatant fluid, 1 c.c. was taken, 0.5 c.c. of 20 per cent. anhydrous sodium carbonate added, and the mixture, corked with absorbent cotton, was placed in a water bath for ten minutes. This was compared in the Kuttner colorimeter with a standard solution of potassium dichromate, made up by matching against a solution of glucose containing 0.2 mg. to the cubic centimeter, treated as the blood was treated, described above.

132 West Eighty-First Street—1421 Madison Avenue.

## MERCURIC CHLORID POISONING FROM VAGINAL INJECTIONS—TWO FATAL

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In the local treatment of acute and chronic pelvic affections, vaginal irrigations are valuable and helpful measures. Usually they are harmless; when carelessly and indifferently employed, however, they may result in extensive local organic destruction and occasionally cause death, as emphasized in two of the clinical instances herewith presented.

CASE 1.—*History.*—Mrs. E. F., aged 29, seen in consultation June 4, 1918, with Dr. George Cunningham, Vineland, N. J., first menstruated at the age of 20, and menstruation had always been regular. It recurred every twenty-eight days, and was not accompanied by pain. The discharge continued from four to five days, and it had always been rather profuse. Frequently it contained clots. She was married at 21, and had had three pregnancies. All continued to full term and terminated normally. She was never sutured.

*Present Illness.*—Four weeks prior to admission to the Vineland Hospital, the patient took a copious douche of hot

1. Benedict, S. R.: A Modification of the Lewis-Benedict Method for the Determination of Sugar in Blood, J. Biol. Chem. 34:201 (April) 1918.

water, to which were added two "blue tablets," (mercuric chlorid). These were employed, she said, to prevent conception. Very soon after the irrigation, the patient was seized with violent burning pain in the vulva and vagina. The family physician prescribed various agents without relief. The following day, the vulva became intensely swollen and red, and presented all the signs of violent inflammation.

TABLE 1.—BLOOD ANALYSES

| | Mg. per 100 C.c. Whole Blood |
|---|---|
| Jan. 14, 1920: | |
| Nonprotein nitrogen | 204 |
| Urea nitrogen | 97.8 |
| Creatinin | 10.6 |
| January 19: | |
| Nonprotein nitrogen | 330.4 |
| Urea nitrogen | 102.6 |
| Creatinin | 11.1 |
| January 23: | |
| Nonprotein nitrogen | 370.5 |
| Urea nitrogen | 132.5 |
| Creatinin | 11.6 |

Urination was difficult and extremely painful. This process continued for several days and latterly had been accompanied by a profuse seropurulent discharge. The material frequently contained long pieces of shreds and membrane.

*Examination and Course.*—Four weeks subsequent to taking the douche the vulva was still somewhat swollen and inflamed. The vagina showed most striking changes. The canal was almost completely closed, and its diameter would not permit the introduction of my index finger. The mucosa had entirely sloughed away and the tube was lined by red, resistant, tender, granular membrane. There were no marked constitutional symptoms at any time. Operative measures were recommended for the vaginal stenosis, but were refused, and the patient passed from the hands of her family physician. No further record could, therefore, be obtained of the case.

CASE 2.—*History.*—Mrs. E. J., aged 21, admitted to Jefferson Hospital, Oct. 11, 1919, first menstruated at the age of 17, one year subsequent to her marriage. It had always been regular, and of the twenty-eight day type. The flow had been scanty and extremely painful. The last menstrual period occurred Aug. 30, 1919, or approximately two months before her admission to the hospital.

*Present Illness.*—Two days before, in order to prevent conception, the patient took a douche of hot water to which she added a teaspoonful of "white powder" (mercuric chlorid). One quart of water was used. Immediately after the irrigation she was seized with violent burning pain. The family physician was called, who applied oils and gave the patient an alkaline douche. The treatment gave temporary relief. The following day the vulva became greatly swollen and discolored. The pain was intense. Shortly afterward a profuse seropurulent discharge appeared which later on contained particles of tissue.

TABLE 2.—DIFFERENCE BETWEEN PATIENT'S BLOOD AND THE NORMAL

| | Normal, Mg. | Patient's Blood, Mg. | Difference, Mg. |
|---|---|---|---|
| Nonprotein nitrogen | From 25 to 35 | 370.5 | 335.5 |
| Urea nitrogen | From 12 to 25 | 132.5 | 120.5 |
| Creatinin | From 1 to 2 | 11.6 | 9.6 |

*Examination and Course.*—The woman was rather delicate. She was suffering great agony. The pupils were normal. The lips were parched, dry and cracked. The tongue and pharynx were extremely red and dry. The mucous membrane throughout the throat was intensely injected. The lungs were normal. The heart presented a moderately loud systolic murmur, and its rate was rapid. The abdomen was somewhat distended, and was rather resistant and tender, especially above the pubic arch. The vulva was found to be extremely swollen, red, tender and in a state of violent inflammation. The labia were pendulous and edematous. The vaginal orifice was covered with a yellowish green exudate, and a profuse seropurulent discharge, foul and offensive, was pouring from the vaginal opening. Digital examination was attempted, but was impossible on account of the intense pain. The temperature was normal. The pulse rate ranged from 100 to 130. Respirations were practically undisturbed. The urine contained a large quantity of albumin, a great variety of casts, and a large number of white and red blood cells. The general systemic symptoms became worse, and she died of complete suppression of urine, October 18, seven days after her admission to the hospital.

CASE 3.—*History.*—Mrs. T. S., aged 28, admitted to Jefferson Hospital, Jan. 9, 1920, had always been in good health and never suffered any serious disease. Menstruation began when she was 13. It was always regular and lasted from three to four days. The flow was accompanied by pain on the first day, but there were no clots. The last period occurred Oct. 13, 1919, approximately three months before her admission to the hospital. She married at the age of 22 and had had three pregnancies. The first pregnancy terminated in abortion at the end of five weeks. This was not induced. The second pregnancy continued to full term, and she was delivered normally. Her third conception occurred, Oct. 13, 1919, and terminated, by self induction, Jan. 8, 1920.

TABLE 3.—URINALYSIS

| Date | Specific Gravity | Reaction | Albumin | Sugar |
|---|---|---|---|---|
| 1/14/20 | Q.N.S.* | Acid | Trace | Negative |
| 1/16/20 | Q.N.S. | Acid | Light cloud | Negative |
| 1/17/20 | 1.015 | Acid | Cloud | Negative |
| 1/18/20 | 1.014 | Acid | Cloud | Negative |
| 1/19/20 | 1.010 | Acid | Trace | Negative |
| 1/20/20 | 1.015 | Alkaline | Trace | Negative |
| 1/21/20 | 1.012 | Acid | Trace | Negative |
| 1/22/20 | 1.015 | Alkaline | Faint trace | Negative |
| 1/23/20 | 1.010 | Alkaline | Trace | Negative |

| | Microscopic Examination | | | |
|---|---|---|---|---|
| White Blood Cells | Blood | Casts | Acetone | Urea, per Cent. |
| Many | Negative | Many | Negative | Negative |
| Many | Negative | Occasional granular | ..... | 1.1 |
| Many | Pus | Occasional granular | ..... | 1.4 |
| Many | Pus | Occasional granular | ..... | 1.2 |
| Many | Pus | Many | | |
| 5-6 | Pus | Many | | |
| 8-10 | Negative | Hyaline | ..... | 2.2 |
| 5-6 | Negative | Many | ..... | 1.4 |
| ..... | Negative | Many | ..... | 1.0 |
| ..... | Negative | ..... | ..... | .... |

* Quantity not sufficient.

*Present Illness.*—This began, January 8, following a uterine irrigation of hot water to which she added two "tablets" (mercuric chlorid). The douche nozzle was carried deliberately into the cervical canal, and the irrigating material was allowed to flush the interior of the uterine cavity. Immediately thereafter the patient was seized with sharp abdominal pain. This was intermittent in character and occurred about every five minutes. Abortion occurred the following day. A fetus 3 inches in length was expelled, and the placenta and membranes came away one hour later. Subsequently the patient developed vomiting and diarrhea. She also felt creepy and suffered a rather violent chill. She had a profuse bloody discharge, which was exceedingly foul. She also developed general joint pains. Urinary excretion became extremely slight. The skin of the patient became extremely dry, and her mouth cracked and parched. The family physician treated her for suppression of urine and uremia by placing her in hot packs. He was not informed by the patient or husband of the true condition of affairs.

*Examination and Course.*—The patient was admitted to the hospital with complete urinary suppression. No urine had been passed during the preceding twenty-four hours, and none was passed for four days subsequently. Diarrhea and vomiting were more or less constant. These were uncontrollable. She complained of intense restlessness and violent headaches. She also suffered with a burning sensation in the region of the vagina and bladder. Her mouth was swollen.

The teeth were tender, and the breath was extremely offensive. The eyes were normal. The lips were dry and cracked. The tongue was dry, coated and furred. The throat was injected. The breath was extremely foul. The lungs were normal. The heart action was regular, and no adventitious sounds were heard. The abdomen was somewhat distended and rather rigid and tender over the kidneys and in the midline, low down. The mucous membrane of the vagina was normal. There was a seropurulent discharge from the uterus. The cervix was patulous and allowed the introduction of the finger. A large slough of endometrium was removed during the examination.

The last specimen of blood was drawn on the morning the patient died, and the comparison (Table 2) will show the difference compared with the normal.

A complete blood count, January 10, revealed: hemoglobin, 60 per cent.; red blood cells, 3,130,000; color index, 0.91; white blood cells, 15,800; the red cells appeared to be normal; polymorphonuclear neutrophils, 98 per cent.; polymorphonuclear eosinophils, 2 per cent.; polymorphonuclear basophils, 0; small mononuclears, 9 per cent.; transitionals, 0. January 18: polymorphonuclear neutrophils, 94 per cent.; polymorphonuclear eosinophils, 2 per cent.; polymorphonuclear basophils, 0; small mononuclears, 2 per cent.; large mononuclears, 1 per cent.; transitionals, 1 per cent.

The symptoms of the patient gradually became worse, and she died, January 23, two weeks after admission.

1621 Spruce Street.

## *Clinical Notes, Suggestions, and New Instruments*

### A CARDIAC DEVELOPMENT DEFECT, WITH RETURN TO NORMAL

STAFFORD McLEAN, M.D., NEW YORK

This case will be of interest to those who are consulted regarding prognosis in infants with congenital cardiac conditions.

REPORT OF CASE

*History.*—The child, a girl, was delivered at the Sloane Maternity Hospital through a vaginal cesarean operation by the late E. B. Cragin. The mother, aged 31, was an eclamptic primipara. She was six and a half months pregnant; her blood pressure was 200 and there was 80 per cent. albumin in the urine. The birth weight was 2 pounds, 1 ounce. On account of the infant's condition the customary measurements were omitted. On the hospital record there is noted a heart murmur present at birth, but there is no mention of cyanosis. A nevus about 1.5 cm. in diameter was present at the outer canthus of the right eye. During the first three months of life this was treated by three applications of liquid air with a good result.

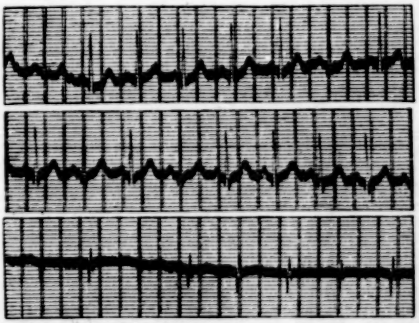
The infant was placed in an incubator, where it was kept for six weeks. The weight on the fourteenth day was 1 pound, 14 ounces. It was discharged from the hospital at the age of 3 months with a weight of 5 pounds, 11 ounces. At 6 months the weight was 5 pounds, 12 ounces. Breast milk was given for the first two months, when modified whole cow's milk was substituted.

*First Examination.*—The infant was first seen by me when 9½ months old. Its weight at that time was 9 pounds, 13 ounces. It was badly nourished, and was intensely cyanotic over the entire body, the cyanosis being marked on the face, lips and hands. The fingers showed marked clubbing; no cardiac enlargement could be made out. A loud systolic murmur was heard over the entire chest, most intense over the area of cardiac dulness. No difference in intensity could be detected between base and apex. The murmur was not transmitted to the vessels of the neck. The heart rate was 260. The systolic blood pressure was 75. The red blood cells were 7,000,000, and the hemoglobin was 105 per cent. Craniotabes was present.

*Treatment and Course.*—The amount of food was increased, cereals were given with a spoon, and before the twelfth month orange juice, beef juice and yolk of hard boiled egg were added. The increase of weight was slow but continuous, and at the twentieth month the weight was 21 pounds, 8 ounces. At this age she was on a varied diet of milk, potato, scraped beef, apple sauce, etc. The murmur did not change in character between the tenth and twentieth month, but the cyanosis became less intense.

The child began to walk at the twentieth month. Examination at the twenty-second month after an interval of two months failed to reveal a murmur, the cyanosis had disappeared, and the clubbing of the fingers was hardly noticeable. When seen again at thirty months there was no clubbing. At 22 months of age she had pertussis. At 25 months of age she had epistaxis several times; this occurred at infrequent intervals until the thirtieth month.

At 32 months of age the child presented a robust, healthy appearance. The physical examination disclosed nothing abnormal. Weight was 31¾ pounds, height 34¾ inches, abdomen 20¾ inches, chest 21 inches, and head 18¼ inches. No enlargement of the heart could be demonstrated by percussion; the apex was in the fifth space, 2½ inches to the left of the midsternal line, the right border was apparently at the border of the sternum.



Electrocardiogram by Leads I, II and III; between the corresponding line of successive pairs of ordinates the time interval is one-fifth second. The space between abscissas represents 0.1 millivolt.

*Roentgenologic Findings.*—When the child was 33 months of age, roentgenograms were made by Dr. Archibald H. Busby. He reported: "Plates show no material enlargement of the heart. The right border is about 1 inch to the right of the midsternal line. The shadow at the base of the heart on the left side is rather broad, the cause of which does not appear to be auricular, but rather within the vessels about the heart."

*Electrocardiographic Findings.*—An electrocardiogram made about the thirty-second month by Dr. H. E. B. Pardee is reproduced here. His opinion was that the record showed an unusual ventricular complex for a child of that age in that it suggested an approach to left ventricular predominance, though this was not frankly developed. He inferred that the heart might have been subjected to some abnormal influence. In his experience the usual electrocardiogram of children of that age showed a normal relation of the R waves or a suggestion of right ventricular predominance. He knew of no congenital anomaly which would lead to a left-sided hypertrophy except aortic narrowing.

*Present Condition.*—The child is now 5 years, 11 months of age. She is a sturdy, well nourished child with no symptoms or physical signs of cardiac abnormality. The weight is 40 pounds, height 42 inches, chest 20¾ inches, and abdomen

20 inches in circumference. She has had none of the infectious diseases of childhood, with the exception of pertussis as noted above. Her heart apex impulse is in the fifth space, 2¾ inches from the midsternal line; the second aortic sound is loud but cannot be considered abnormal.

COMMENT

The case is unusual from several angles. It is unusual for pregnancy terminated at 6½ months to result in a living child. It is uncommon for an infant to survive whose weight drops to a point as low as 1 pound, 14 ounces.

Speculation is futile regarding the defect or defects in many of the infants with cardiac symptoms. That the symptoms were due to a developmental defect rather than a fetal endocarditis is borne out by the history and the outcome. It would seem possible that the disappearance of the symptoms was due to the return of the heart to normal rather than to the development of an unusual degree of compensation. A defect in the ventricular septum existing without any associated lesion could explain the symptoms and their subsequent disappearance.

17 East Seventy-First Street.

## A NEW INSTRUMENT FOR LIGATING BLEEDING BLOOD VESSELS AFTER THE REMOVAL OF TONSILS

JOHN A. CAVANAUGH, M.D., CHICAGO

The instrument here described has been a great comfort to the originator, as he can leave all patients after tonsillectomy with a feeling of safety, knowing he will not be called because of hemorrhage. The instrument can be used with ease when the bleeding vessel is deep in a cavity, as it requires but little space.

Instrument for ligating bleeding blood vessels after removal of tonsils.

It is similar in shape to artery forceps. On the end of one arm there is a needle about half an inch long; at the end of the other arm is a rounded end, perforated, through which the needle will pass.

Parallel with the arm and extending beyond the perforating area in this arm is a forklike process with two prongs to form a groove between the rounded part and the fork part for the passage of a thread, which is grasped by the needle as it passes through. On the handle of the perforated blade is a spring for the purpose of placing the threads and of holding them taut, which is very essential.

The instrument is now ready for use. The size of the catgut should be noted, for if it is too large it will not engage in the needle; No. 0 or No. 1 may be used. The catgut should be moistened shortly before use; otherwise it will be stiff, will not remain taut, and will be harder to draw through the instrument and tissue. Every bleeding vessel that shows itself should be tied, as this is easily done and one need not be afraid of future hemorrhage. The bleeding area is grasped with artery forceps. One should take the instrument that is threaded, and introduce it as one would a second forceps, to grasp the tissue deeper, make slight traction on the hemostat and allow the needle to pass through the tissue, which, when withdrawn, leaves the thread buried under the bleeding vessel and engaged in the perforated end of the needle.

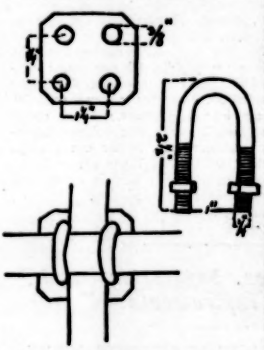
As soon as the needle is drawn through with thread attached, the thread in the spring is loosened and the thread will be more easily drawn through. The artery forceps may now be removed, or one may wait until the ligature has been tied.

7 West Madison Street.

## A SIMPLE CLAMP FOR MAKING BALKAN FRAMES OF IRON PIPE

GEORGE T. JOHNSON, M.D., TERRE HAUTE, IND.

These clamps can be quickly made by any blacksmith, from materials in general use. Each clamp consists of an iron plate made of one-eighth inch sheet iron, and two U bolts. Four holes are drilled in the plate to admit the free ends of the U bolts. The dimensions given are suitable for use with one-half inch pipe.




Clamp for making Balkan frames of iron pipe.

A joint made with these clamps will not slip under a great load. They will likewise fasten the upright pipes firmly to the ordinary iron bed. If it is desired to make the frame independent of the bed, crutch rubbers serve admirably on the lower ends of the upright pipes and prevent any possible damage to the floor.

It is best to have sixteen clamps for each frame so that one can make any arrangement suitable for the individual case. The accompanying illustration shows how the clamp is applied.

## RAPID ABSORPTION OF MERCURIC CHLORID IN A CASE OF POISONING

SEYMOUR DePORTE, M.D., ARDMORE, OKLA.

B., a white girl, aged 21, waitress, was suddenly seized with terrific abdominal pain, and symptoms of a severe gastroenteritis with vomiting and purging. The temperature was subnormal, ranging between 95.4 and 96 F.; the skin was cold and clammy; the pupils were markedly dilated, and the radial pulse was not perceptible.

On questioning the patient, it was ascertained that she had inserted two 7.3 grain mercuric chlorid tablets into the vagina to prevent conception.

She was brought to the hospital and was given electric sweat box treatment for rapid elimination, calcium sulphid was given grain for grain, diuretics were given freely, and strychnin hypodermically. Egg albumin by mouth gave no relief. She craved water continually, but would not take nourishment.

Hot water bottles were used with electric heat appliances. The temperature remained subnormal throughout. Urination was scanty, and finally entirely suppressed. There was diarrhea with tenesmus and sanguinolent discharges, and the skin was infiltrated with a dark pigment.

She was easily roused and her mind was clear. Questions were readily answered.

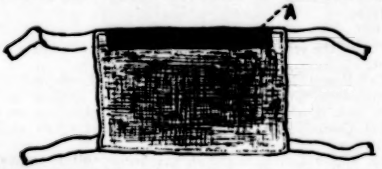
Vaginal examination revealed great tenderness with slight bloody discharge. Not a drop of urine could be obtained within eighteen hours.

The patient died in about twenty-four hours of the time she was brought to the hospital from acute traumatic nephritis.

## SURGEON'S MASK FOR THOSE WHO WEAR GLASSES

C. E. LOCKE, JR., SAN FRANCISCO

On entering the operating room, one often sees a surgeon who is being annoyed because his mask does not fit. Especially is the surgeon who wears glasses bothered. If his mask is adjusted to cover the nose, then his glasses soon become so "smoked up" that vision is difficult. The remedy is simple: A narrow strip of adhesive tape is sewed adhesive side up to the upper edge of the mask on its internal side, as shown in the accompanying illustration. This sticks the mask to the bridge of the nose and under the eyes. Thus



Inside of mask: *A*, adhesive strip (adhesive surface up) sewed to it.

the mask is prevented from sliding, and also the warm breath is prevented from passing upward and condensing on the glasses, rendering them more translucent than transparent. Another more simple method of accomplishing the same result is by the use of a strip with a double face of adhesive tape, such as is made by Johnson and Johnson to secure wigs to the head.

# New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

**BARBITAL SODIUM-ABBOTT** (See New and Nonofficial Remedies, 1920, p. 84).

The following dosage form has been accepted:

*Elixir Barbital Sodium-Abbott.*—Each fluid ounce contains barbital sodium-Abbott 20 grains.

**CHLORAZENE** (See New and Nonofficial Remedies, 1920, p. 137).

The following dosage form has been accepted:

*Aromatic Chlorazene Powder.*—A powder composed of chlorazene, 5 per cent.; sodium bicarbonate, 5 per cent.; eucalyptol, 2 per cent.; saccharin, 1 per cent.; sodium chloride, 87 per cent.

**DESICCATED CORPUS LUTEUM-HOLLISTER-WILSON** (See New and Nonofficial Remedies, 1920, p. 204).

The following dosage forms have been accepted:

*Capsules Corpora Lutea Desiccated-Hollister-Wilson 2 grains.*—Each capsule contains desiccated corpus luteum-Hollister-Wilson 2 grains.

*Capsules Corpora Lutea Desiccated-Hollister-Wilson 5 grains.*—Each capsule contains desiccated corpus luteum-Hollister-Wilson 5 grains.

*Tablets Corpus Luteum Desiccated-Hollister-Wilson 2 grains.*—Each tablet contains desiccated corpus luteum-Hollister-Wilson 2 grains.

*Tablets Corpus Luteum Desiccated-Hollister-Wilson 5 grains.*—Each tablet contains desiccated corpus luteum-Hollister-Wilson 5 grains.

**DIPHTHERIA IMMUNITY TEST (SCHICK TEST)** (See New and Nonofficial Remedies, 1920, p. 304).

The Gilliland Laboratories, Ambler, Pa.

*Schick Test.*—Marketed in packages containing a capillary tube of diphtheria toxin (standardized) and a 5 Cc. vial of physiological solution of sodium chloride for dilution, the amount being sufficient for 20 tests; also marketed in packages containing four capillary tubes of diphtheria toxin and four vials of physiological solution of sodium chloride. Two-tenths (0.2) Cc. of the dilution is injected intradermally which represents 1/50 minimum lethal dose for a guinea-pig of 250 gram weight.

**CORPORA LUTEA SOLUBLE EXTRACT—HOLLISTER-WILSON.**—A sterile solution of those constituents of corpus luteum which are soluble in physiological solution of sodium chloride containing in each Cc. 0.02 Gm. of soluble matter in addition to sodium chloride, and chlorbutanol as a preservative.

*Actions and Uses.*—See general article on Ovary, New and Nonofficial Remedies, 1920, p. 201.

*Dosage.*—1 Cc. daily in extreme cases. Less according to individual cases.

Manufactured by the Hollister-Wilson Laboratories, Chicago.

*Ampoules Corpora Lutea Soluble Extract-Hollister-Wilson.*—Each ampule contains 1 Cc. corpora lutea soluble extract-Hollister-Wilson.

Corpora Lutea Soluble Extract-Hollister-Wilson is made by extracting desiccated corpus luteum with physiological solution of sodium chloride, and is adjusted to contain 0.02 Gm. of soluble extract in each Cc. The equivalent weight of dried corpus luteum represented by this amount of soluble extract is variable ranging from about 0.06 Gm. to 0.15 Gm.

Corpora Lutea Soluble Extract-Hollister-Wilson is a straw colored liquid with the peculiar odor of corpora lutea.

**EUCATROPINE.** — Euphthalmine. — Phenyl-Glycolyl-Methyl-Vinyl-Diacetonalkamine Hydrochloride.—$C_6H_5N(CH_3)_2(C_6H_5CHOH.COO)HCl$ = The 1,2,6,6-tetramethyl-4-mandeloxy-piperidine hydrochloride. Eucatropine was first introduced as euphthalmine.

*Actions and Uses.*—Eucatropine produces prompt mydriasis free from anesthetic action, pain, corneal irritation, or increase in intra-ocular tension. It has little or no effect on accommodation, and such effect as it has disappears more rapidly than with atropine, cocaine, homatropine, etc. In its effects on the general system, eucatropine very closely resembles atropine. It is useful as an aid in ophthalmoscopic examinations in place of atropine, homatropine, etc.

*Dosage.*—From 2 to 3 drops of a 5 to 10 per cent. solution, according to the age of the patient and the nature of the case, are instilled into the eye.

Eucatropine is prepared by methylating vinyl-diacetonalkamine (M. P. 161 C.) esterifying the methyl vinyl-diacetonalkamine with mandelic acid, treating the free ester in ether solution with gaseous hydrogen chloride, and recrystallizing the precipitated hydrochloride.

Eucatropine is a white, granular, odorless powder; permanent in the air.

Eucatropine is very soluble in water; freely soluble in alcohol and chloroform; insoluble in ether.

Eucatropine melts not below 183 C.

The aqueous solution of eucatropine (1:50) is clear and colorless and is neutral to litmus.

Aqueous solutions of eucatropine (1:50) are precipitated by sodium carbonate test solution, potassium mercuric iodide test solution, iodine test solution, picric acid test solution and many other reagents for the alkaloids.

Add a few drops of nitric acid to about 0.005 Gm. of eucatropine, evaporate the mixture to dryness on a water bath, cool and add a few drops of alcoholic potassium hydroxide test solution together with a fragment of potassium hydroxide. No violet color results (*distinction from atropine, scopolamine or hyoscyamine*).

Incinerate about 0.5 Gm. of eucatropine, accurately weighed. The ash amounts to not more than 0.1 per cent.

Dissolve about 1 Gm. of eucatropine, accurately weighed, in 10 Cc. of water, make alkaline with ammonia water, shake with successive portions of ether until extraction is complete, washing the ether layer each time with water and adding the washings to the original solution before the next extraction, allow the solvent to evaporate spontaneously, dry the residue to constant weight at 80 C. and weigh. The residue of eucatropine base is not less than 86 per cent.

Recrystallize the free base obtained as above from petroleum ether. The crystals melt at not below 111 C.

**Eucatropine-Werner.**—A brand of eucatropine complying with the N. N. R. standards.

Manufactured by the Werner Drug and Chemical Co., Cincinnati, Ohio. No U. S. patent or trademark.

**Early Diagnosis of Cancer.**—Unfortunately the very smallest cancers give no symptoms unless they are on the skin or lip or tongue or elsewhere on the surface of the body, in which situations the earliest diagnoses can be made. Cancers the size of a pea or but a little larger are often diagnosed and removed by a surgeon with an assured favorable result, if the operation has been properly done. In the stomach and internal organs, however, the cancer does not give rise to symptoms until it is quite large, and it is important, therefore, for any one who has any disturbance of the stomach or intestines, loss of weight or anemia, to go at once to a surgeon, because by modern chemical methods and by the use of the roentgen ray, a diagnosis can often be made long before the cancer can be felt or seen. One of the last symptoms of cancer is pain, which is caused by the growth pressing on the nerves as it spreads out through the tissues. —*Health News*, Albany, N. Y., February, 1920.

# PROCEEDINGS OF THE NEW ORLEANS SESSION

## MINUTES OF THE SEVENTY-FIRST ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT NEW ORLEANS, APRIL 26-30, 1920

## HOUSE OF DELEGATES

### First Meeting—Monday Morning, April 26

The House of Delegates met in the Orleans Parish Medical Society Building, New Orleans, and was called to order at 10 a. m. by the Speaker, Dr. Hubert Work, Pueblo, Colo.

**Preliminary Report of the Committee on Credentials**

The Chairman of the Committee on Credentials made a preliminary report for this committee, stating that the committee desired at this time to report progress, and that more than a quorum of delegates had qualified.

As there was no objection, the report was accepted.

Next in order was the roll call by the Secretary.

The Secretary stated that the registration of the delegates in attendance recorded the presence of more than a quorum.

A quorum being present, the Speaker announced that the House was constituted and ready for the transaction of business.

The next order of business was the presentation, correction, and adoption of the minutes of the Seventieth Annual Session.

The Secretary stated that the minutes had been printed and circulated among the members of the House of Delegates, with the request for criticisms or corrections, but none had been received.

It was moved that the reading of the minutes of the Seventieth Annual Session be dispensed with and approved as printed.

Seconded and carried.

**Addresses of Executive Officers**

Drs. Hubert Work, Speaker; Alexander Lambert, President, and William C. Braisted, President-Elect, addressed the house. See addendum.

## Reports of Officers

**Report of the Secretary**

*To the Members of the House of Delegates of the American Medical Association:*

The following report for the year 1919-1920 is respectfully submitted:

MEMBERSHIP

The membership of the various constituent state associations which is the membership of this Association, according to records in the Secretary's office, April 1, 1920, was 83,338, as shown in the accompanying table.

FELLOWSHIP*

The Fellowship of the Scientific Assembly of the American Medical Association on May 1, 1919, was 45,412. During the year 477 Fellows have died, 123 have resigned, 171 have been dropped as not eligible, 303 have been dropped for nonpayment of dues, and the names of ten have been removed from the rolls on account of being reported "not found," making a total of 1,084 names to be deducted from the Fellowship roll. There have been added to the Fellowship roll 3,307 names of which 2,136 were transferred from the subscription list of THE JOURNAL. The Fellowship of the Association on April 1, 1920, was 47,045, a net increase for the eleven months covered by this report of 1,633.

This gain in the number of Fellows, as in previous years, is due largely to circularizing subscribers to THE JOURNAL who are eligible to Fellowship, urging them to become Fellows.

DEATHS OF OFFICERS

During the year, two of the officers of the Association have died:

Dr. Emery Marvel, Atlantic City, N. J., Second Vice President, died in Philadelphia following a surgical operation, Jan. 8, 1920. Dr. Marvel was the chairman of the Local Committee on Arrangements for last year's annual session.

Dr. Elmer Ernest Southard, Cambridge, Mass., chairman of the Section on Nervous and Mental Diseases, died in New York City on Feb. 8, 1920, after a brief illness.

INTERIM APPOINTMENT

Early last fall, Dr. J. B. Blake, Boston, resigned as a member of the Council on Scientific Assembly, and the President appointed Dr. Frank P. Gengenbach, Denver, to serve on this council until this annual session.

ORGANIZATION

In my report submitted at the last annual session, a comment was made relative to the activity of the Association in assisting those physicians who had been in military service to resume civil practice, and it was stated that the almost universal opinion was that these physicians were finding a hearty reception in the localities where they formerly practiced, and that where they had elected to locate in new communities, they were in practically all instances welcomed by the medical profession. Attention was called to the task which confronted the Association along with its constituent state associations and their component societies to assist in bringing about a better state of affairs in the medical profession. It is gratifying to report that since the 1919 annual session, the organized medical profession has met the obligation which was then anticipated, and that in large part the members of the Medical Reserve Corps have again taken up civil practice.

There are, however, new obligations somewhat similar in character which must be undertaken. As noted last year, it cannot be expected that an exact prewar status will ever be restored. There are new economic and civil relationships affecting every calling which have and will develop during the reconstruction period. All of these are of peculiar interest to the individual practitioner both in his personal and family relationships and in his ability to serve the public. In all these questions, the American Medical Association, as the inclusive nonsectarian organization of practitioners of medicine of the United States, must have an active interest, and must give its best endeavor to the solution of the problems involved. Many of these will command the attention of the House of Delegates, and where it is advisable investigations should be directed to be conducted by the several Councils of the Association so that when the House of Delegates next meets, it shall have at hand data which will warrant the determining of the policy of the Association in these various matters.

In order that the Association shall be able to cope with these problems, it is advisable to strengthen our organization wherever this is possible. Not only should the various branches of the organization—the county, state and the national—put forth earnest efforts to increase membership, but a concerted effort should be made to attain a closer and more intimate cooperation between these branches. There is a possible danger which should be guarded against

* These figures do not include those who are still Fellows of the Scientific Assembly by virtue of their being commissioned and on active duty as Medical Reserve Corps Officers, but who, previous to their military service, were not Fellows.

—namely, a multiplicity of organizations in the same territory having practically the same objective. Whenever an unnecessary new organization in an already occupied territory is effected, there is always the danger that rivalry will result between the two organizations which consciously or unconsciously will interfere with the effectiveness of the organization of the medical profession in that locality. In a few instances, new organizations of this character have diverted from the county and the state branches of the Association the activities of certain members who previously had taken a leading part in county and state work, and it has been proposed even that financial support should be given to certain of these new bodies in a manner which might deprive the branches of the American Medical Association of the benefits of funds which, if available, could be used best through the regular channels of the state and county organizations. It is, of course, recognized that the American Medical Association and its several branches, as well as these newer organizations, are purely voluntary organizations. No one can be compelled to hold a membership which he does not desire, nor should he be forced to withdraw from or refuse to join any other organization in order that he may maintain his membership in a component branch of the American Medical Association. Nevertheless, it seems advisable to submit this matter to the House of Delegates in the hope that the members will give careful consideration to the advisability of strengthening the organization wherever this is possible, and that the question in turn may be brought to the attention of the state associations and the county societies, and that in all branches of the organization, members of the medical profession shall be urged to devote themselves to the advancement as well as the extension of the county, state and national bodies.

Other matters in which the office of the Secretary has been active, are reported to the House of Delegates from other sources.

Respectfully submitted,

ALEXANDER R. CRAIG, Secretary.

## ORGANIZATION OF CONSTITUENT ASSOCIATIONS

| Constituent Association of | No. Counties in State | No. Component Societies in State Assn. | Number Counties in State Not Organized 1919 | Number Counties in State Not Organized 1920 | No. Physicians in State (6th Ed. Directory) | Number Members of State Association 1919 | Number Members of State Association 1920 | No. A. M. A. Fellows in State | No. Subscribers to Journal in State |
|---|---|---|---|---|---|---|---|---|---|
| Alabama | 67 | 67 | ..... | ..... | 2,330 | 1,751 | 1,798 | 411 | 368 |
| Arizona | 14 | 11 | 3 | 3 | 233 | 188 | 213 | 160 | 106 |
| Arkansas | 75 | 63 | 12 | 12 | 2,567 | 1,001 | 1,042 | 380 | 296 |
| California | 57 | 43 | 17 | 14 | 5,929 | 3,273 | 3,311 | 2,089 | 1,402 |
| Colorado | 63 | 29 | 34 | 34 | 1,713 | 1,049 | 1,054 | 565 | 384 |
| Connecticut | 8 | 8 | ..... | ..... | 1,701 | 1,048 | 1,054 | 653 | 400 |
| Delaware | 3 | 3 | ..... | ..... | 264 | 102 | 123 | 73 | 57 |
| Dist. Columbia | | | ..... | ..... | 1,227 | 573 | 567 | 388 | 274 |
| Florida | 54 | 32 | 22 | 22 | 1,298 | 566 | 573 | 295 | 226 |
| Georgia | 154 | 92 | 63 | 62 | 3,436 | 1,426 | 1,188 | 539 | 565 |
| Idaho | 44 | 19 | 16 | 25 | 449 | 123 | 184 | 94 | 140 |
| Illinois | 102 | 101 | 1 | 1 | 10,909 | 6,894 | 7,049 | 4,584 | 2,373 |
| Indiana | 92 | 91 | 1 | 1 | 4,765 | 2,093 | 2,331 | 1,533 | 591 |
| Iowa | 99 | 99 | ..... | ..... | 4,004 | 2,250 | 2,342 | 1,332 | 710 |
| Kansas | 105 | 67 | 42 | 38 | 2,683 | 1,657 | 1,760 | 837 | 429 |
| Kentucky | 119 | 117 | 3 | 2 | 3,503 | 2,130 | 2,353 | 731 | 398 |
| Louisiana | 64 | 40 | 24 | 24 | 2,023 | 1,029 | 1,303 | 470 | 415 |
| Maine | 16 | 15 | 1 | 1 | 1,179 | 720 | 712 | 326 | 162 |
| Maryland[1] | 23 | 21 | 2 | 2 | 2,288 | 1,047 | 1,143 | 708 | 579 |
| Massachusetts[2] | 14 | 14 | ..... | ..... | 5,870 | 3,709 | 3,840 | 2,243 | 1,284 |
| Michigan | 83 | 81 | 2 | 2 | 4,598 | 2,978 | 2,620 | 1,685 | 763 |
| Minnesota | 88 | 83 | 3 | 3 | 2,548 | 2,667 | 1,335 | 1,115 | 656 |
| Mississippi | 81 | 78 | 3 | 3 | 1,975 | 361 | 499 | 281 | 283 |
| Missouri[1] | 114 | 103 | 14 | 11 | 6,063 | 3,345 | 3,402 | 1,529 | 847 |
| Montana | 50 | 17 | 27 | 33 | 681 | 375 | 375 | 190 | 144 |
| Nebraska | 92 | 64 | 29 | 28 | 2,237 | 882 | 1,116 | 652 | 499 |
| Nevada | 16 | 3 | 13 | 13 | 152 | 79 | 73 | 43 | 39 |
| New Hampshire | 10 | 10 | ..... | ..... | 657 | 528 | 526 | 279 | 79 |
| New Jersey | 21 | 21 | ..... | ..... | 3,046 | 1,814 | 1,748 | 1,187 | 727 |
| New Mexico | 29 | 12 | 16 | 16 | 456 | 207 | 199 | 108 | 109 |
| New York | 61 | 61 | 1 | ..... | 15,877 | 8,540 | 9,110 | 5,302 | 3,158 |
| North Carolina | 100 | 86 | 14 | 14 | 2,237 | 1,231 | 1,377 | 433 | 464 |
| North Dakota | 52 | 51 | 2 | 1 | 604 | 429 | 431 | 209 | 125 |
| Ohio | 88 | 87 | 1 | 1 | 7,802 | 3,832 | 4,670 | 2,432 | 1,323 |
| Oklahoma | 77 | 67 | 12 | 10 | 2,675 | 1,453 | 1,638 | 610 | 284 |
| Oregon | 36 | 33 | 3 | 3 | 1,198 | 712 | 707 | 263 | 281 |
| Pennsylvania[3] | 67 | 63 | 4 | 4 | 11,539 | 6,028 | 6,687 | 4,407 | 2,372 |
| Rhode Island[4] | 5 | 5 | ..... | ..... | 759 | 409 | 400 | 296 | 132 |
| South Carolina | 46 | 41 | 4 | 5 | 1,237 | 719 | 940 | 305 | 200 |
| South Dakota | 67 | 10 | 8 | 8 | 646 | 368 | 385 | 226 | 163 |
| Tennessee | 96 | 67 | 29 | 29 | 3,481 | 1,569 | 1,612 | 643 | 429 |
| Texas | 248 | 178 | 71 | 70 | 6,236 | 3,069 | 3,102 | 1,295 | 768 |
| Utah | 29 | 4 | 25 | 25 | 477 | 229 | 304 | 173 | 123 |
| Vermont | 14 | 12 | 2 | 2 | 639 | 423 | 406 | 163 | 97 |
| Virginia[4] | 100 | 59 | 41 | 41 | 2,509 | 1,773 | 1,735 | 591 | 463 |
| Washington | 39 | 19 | 20 | 20 | 1,673 | 1,100 | 1,068 | 535 | 352 |
| West Virginia | 55 | 43 | 12 | 12 | 1,730 | 1,081 | 1,078 | 581 | 299 |
| Wisconsin | 71 | 71 | ..... | ..... | 2,783 | 3,041 | 1,904 | 1,110 | 625 |
| Wyoming | 22 | 5 | 17 | 17 | 254 | 93 | 92 | 73 | 76 |
| Misc., Foreign, Govt. sub. for Army, Navy & U. S. P. H. S. | | | | | | | | 137 | 2,799 |
| Canal Zone | | | | | | 109 | 102 | 20 | 26 |
| Hawaii | 5 | | | | | 72 | 72 | 40 | 40 |
| Porto Rico | 7 | | | | | 93 | 126 | 34 | 44 |
| Philippine Isl. | | | | | | 110 | 144 | 43 | 82 |
| Totals | 3,089 | 2,366 | 614 | 612 | 145,384 | 82,288 | 83,338 | 45,908 | 30,119 |
| Commissioned Officers[5] and Honorary Fellows | | | | | | | | 1,779 | |
| | | | | | | | | 47,045 | |

* Not including Fellows of American Medical Association.

Note.—The number of members of the different associations stated in this table is in accord with the membership of the several associations as they were reported to the Secretary on April 1, 1920.

2. The lack of an effective uniform system for reporting the membership of the state associations accounts for whatever discrepancies this table shows and detracts from the value of the statement.

Component societies are those societies which compose the state association. A component society may include one county or more.

1. The state of Maryland has 23 counties and the city of Baltimore; Missouri has 114 counties and the city of St. Louis.

2. These state associations are divided into district societies, and these are listed in the table as component societies. Some of these districts are smaller and some larger than the county, the county lines being ignored.

3. Provision is made for the physicians in each of these counties to join the component society in an adjoining county.

4. Virginia has recently adopted the plan of organization and is now establishing component county medical societies.

5. This figure includes the Medical Corps of the Army, the Navy and the Public Health Service.

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### Report of the Board of Trustees

Dr. Philip Marvel, Chairman, presented the following report, which was referred to the Reference Committee on Reports of Officers.

*To the Members of the House of Delegates of the American Medical Association:*

In these times of unusual political and social unrest, with the general dissatisfaction accompanying high cost of living, it is a pleasure to be able to report that the various activities of the Association are progressing satisfactorily and that so far as THE JOURNAL is concerned the year has been one of the most satisfactory in its existence.

The detailed statement which appears in tabular form in the addenda will show that there were 3,760,351 copies of THE JOURNAL printed in 1919—265,504 more than during the previous year—and that the average weekly circulation was 72,314. On January 1 the actual circulation was 74,919; this number does not include extra, sample or special copies that were sent out week by week. THE JOURNAL mailing list on Jan. 1, 1920, as compared with January 1 of the preceding year shows an increase of 7,375; that is to say, there was an increase of over 7,300 in the circulation of THE JOURNAL during the year 1919—a remarkable showing considering all the conditions.

#### ADVERTISING DEPARTMENT

The advertising department makes an unusually good showing: this is due partly to the amount of advertising space sold, but more particularly to increased advertising rates. Naturally, the larger the circulation of a periodical the more valuable it becomes as an advertising medium and the higher is the rate for advertising space it commands. However, the past year has been one of great prosperity, and business firms have been very liberal in advertising. This must be kept in mind in planning for the future. It is needless to add that we are keeping our advertising up to the standard which has prevailed for many years; that if we cared to lower this standard there might be still a larger increase in the advertising income.

#### SPANISH EDITION

The first year of the Spanish Edition of THE JOURNAL has been reasonably satisfactory. Its publication was undertaken with some hesitancy because it meant a venture in an entirely

new field. Other periodicals had been published in this country in the Spanish language for circulation in South and Central America, but their publication was undertaken for commercial reasons. Our Spanish Edition entered the field solely as a scientific periodical for educative and scientific purposes, and it has been received with approbation. The field was a difficult one to work in the first place because there was not available any physician's directory, or any even fairly reliable list of physicians of standing. However, a list of such physicians has been gradually assembled so that now there is a fairly reliable one at the Association headquarters. Included in this list are the physicians of Central and South America and the Philippine Islands.

Another difficulty has been the mailing facilities; these have been anything but satisfactory. Under normal conditions it takes a long time for a communication to reach the South American countries, with the exception of those bordering on the Gulf of Mexico.

At the end of the year the subscription list comprised 2,908 names. To those who appreciate the difficulties and know the conditions that prevailed at the beginning, this must be regarded as quite satisfactory. Roughly, this circulation is as follows: The largest number of subscribers naturally are in Mexico—539; Cuba next, 530; Argentina, 270; Brazil, 194 (in Brazil Portuguese is the language in general use, therefore it is rather remarkable that this number of subscribers has been secured there); Chile, 179; Spain, 142; Peru, 101. The rest of the circulation is in Bolivia, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Nicaragua, Paraguay, Salvador, Santo Domingo, Uruguay, Venezuela, Panama and Porto Rico.

It is not to be expected that this journal could be published without a loss for the first few years. As will be remembered, the venture was undertaken at the request of the International Health Board of the Rockefeller Foundation, which agreed to pay half the loss. It should be explained in this connection that the number of copies of each issue printed was 4,500 to 5,500, and that the excess above those subscribed for was sent out as sample copies. Hereafter, of course, there will be fewer sample copies distributed; consequently a less expense with an increased income. During the months of January, February and March the circulation has been steadily increasing. The actual loss to the Association to date has been less than $10,000, which amount promises to be returned with more than gratifying results within the first five year period of its publication.

### Archives of Internal Medicine

The Archives of Internal Medicine has made a good showing for the past year. On December 31 there were 2,593 subscribers—seven less than the previous year. This decrease was due to the fact that the government, which during the war had taken a large number of copies, had since cut down its order considerably. There was actually an increase of 227 in our domestic list, and of forty-five in the foreign list.

A reference to the auditor's report will show that this journal made a net gain last year of $1,692.82, as compared with a loss the previous year of $1,320.58. This better showing is explained in part by the fact that the two volumes for 1919 were smaller than in previous years, and in part also by the increased subscription price. Previous to last year the regular price was $4 per annum, but if taken in combination with one or more of the other Association periodicals only $3. The price at the present time has been made $5, and the combination price $4. Last year there were only 217 subscribers who paid the full $5 rate.

### American Journal of Diseases of Children

The American Journal of Diseases of Children likewise made a very satisfactory showing: On Jan. 1, 1920, there were 2,531 names on the mailing list—an increase of 417 over January 1 of the previous year—and the auditor's report shows a gain of $784.37, as compared with a gain of $404.62 in 1918. In this journal, the number of pages for 1919 was much increased over that of the previous year.

The subscription price was also increased from $3 to $4, but here again practically all the subscribers get it at the club rate of $1 less than the regular price.

### Archives of Neurology and Psychiatry

None of the other special journals published by the Association seems to have given more satisfaction or to have been more appreciated by the specialists for whom it is published than the Archives of Neurology and Psychiatry. The circulation on Jan. 1, 1920, was 1,158. Considering the special character and the limited number of men to whom such a journal will appeal, this circulation in a year is phenomenal; it is larger than that of any other journal devoted to these subjects in any language.

Naturally a loss might have been expected, but the loss as shown in the auditor's report—$2,695.40—is greater than it should be, and indicates that, considering the size of the publication, the number of pages (the two volumes for 1919 contained 1,546 pages), the number and character of the illustrations—many being in colors—the original price of $5 was too low, especially as the subscribers, with very few exceptions, pay $1 less than the regular price in combination with other journals. The price of this periodical will, therefore, be raised from July 1 to $6, which means $5 in combination with any other of the Association's publications.

### Archives of Dermatology and Syphilology

In January we commenced the publication of the Archives of Dermatology and Syphilology, which has started out very well.

### Archives of Surgery

It is proposed to commence the publication of the Archives of Surgery in July. It is now planned to publish this at first as a bimonthly; later, as the amount of material increases, it will become one of the monthly publications.

### Publication of Special Journals

The Constitution states that the object of the American Medical Association is to promote the science and art of medicine. The Trustees are of the opinion that there is no better way of doing this than by aiding the various scientific workers in the publication of their contributions. The Association is unusually well equipped mechanically to do the printing; and its facilities for direct contact with the profession make possible the promotion of these publications in an economic manner. This undoubtedly is being thoroughly appreciated, for other special groups are beginning to look to the Association to help them out in the publication of their special periodicals. For instance, an appeal from a large number of physicians was received by the Trustees urging the Association to publish a journal to take the place of the *American Journal of Obstetrics and Diseases of Women and Children*. The present condition of our printing plant is such, however, that it does not seem advisable to attempt the publication of any more journals for a while.

While the Trustees favor the publication of these journals by the Association they feel that they should not be published at a loss, but rather at cost or at slightly above cost.

### Quarterly Cumulative Medical Index

This is another of the scientific publications of the Association, of which the Association should be proud. The circulation at the end of the year was 738—an increase of only 88 during the year. However, no effort has heretofore been made to push the circulation of the Index. From now on and until the scientific men of our profession know that there is such a help for research workers at a nominal price, more effort will be made to increase the circulation.

The Index last year sustained a loss of $1,787.12. Here again we realize that the price is lower than it should be, and after July 1 there will be an increase of $1, making it $5 per annum. Those who know the book appreciate the fact that this is an extremely low price for one of its kind. It could not be published without a greater loss if it were not for our splendid facilities.

### COOPERATIVE MEDICAL ADVERTISING BUREAU

This Bureau is no longer an experiment, it is a great success; it is so regarded, we believe, by all the state journals it represents, which means by all the state journals except that of Illinois. It has now become self-supporting, and at the end of 1919 it was possible to rebate a considerable sum to the journals represented, as was done at the end of 1918.

As we have stated in our former reports, the Bureau has demonstrated that it is possible to secure for these journals a fair amount of advertising of which neither the journals themselves nor the medical profession need be ashamed. The Bureau has removed the temptation to accept that class of advertising which for so many years had been not altogether creditable.

### COUNCIL ON PHARMACY AND CHEMISTRY

In reply to the suggestion made last year by President Bevan that there should be closer cooperation between the large pharmaceutical houses and the Council on Pharmacy and Chemistry, the Council has submitted to the Board of Trustees the following statement:

"COOPERATION OF THE PHARMACEUTICAL HOUSES: At the opening meeting of the House of Delegates last year, President Arthur Dean Bevan suggested the desirability of greater cooperation between the large pharmaceutical houses and the Council on Pharmacy and Chemistry. The need of such cooperation has been recognized by the Council from the first. In no one direction has the Council made greater effort than in its endeavor to secure the fullest cooperation of the various pharmaceutical houses. The difficulty has been, and always must be, the fundamental antagonism between objectives that are largely commercial on the one hand and purely scientific on the other. Nevertheless, the Council has always believed—and has acted on the belief—that there is a possible middle ground wherein the interests of therapeutics would not be injured but would go hand in hand with a commercial development based on enlightened self interest.

"The profits to be made by a pharmaceutical house from the sale of a staple drug—a pharmacopeal, National Formulary, or nonproprietary preparation—which enters into free competition with other drugs of the same kind, are moderate; the profits to be made from the sale of a proprietary medicine on which the manufacturer holds a monopoly are usually large—sometimes enormous. There are, broadly, two kinds of proprietary preparations advertised to physicians: One represents laborious research ending in the production of a new medicinal chemical; this product can be patented and the manufacturer can obtain a seventeen-year monopoly on its manufacture and sale. The other represents no research but comprises simple mixtures—frequently of the "shotgun" variety—of well known pharmaceuticals, or biologic products sold under trade names. As these do not represent anything new or original the manufacturer is unable to obtain a patent, but by means of the trade name he can and does obtain a perpetual monopoly. This, from a business standpoint, is more valuable than the limited monopoly granted by a patent. It is not surprising that proprietary remedies of the latter type flourish so long as physicians unthinkingly accept and prescribe them solely on the manufacturer's representations.

"The Council has practically the undivided support of manufacturers of medicinal chemicals; that is, of proprietaries of the first mentioned type. But pharmaceutical firms which have found it profitable to promote proprietaries of the second type—"specialties," unscientific or ordinary mixtures of pharmaceuticals or biologic products sold under trade names—have not supported the Council.

"When the Council was organized, it was hoped and believed that all the large pharmaceutical houses would find it possible and desirable, if not actually more profitable, to shape their business methods so as to make their proprietary and other articles conform to those conservative standards on which the Council bases its rules, and thus render such articles acceptable for New and Nonofficial Remedies. It soon developed, however, that the methods of the pseudochemical companies, whose sales propaganda in the interest of unscientific nostrums with its attending damage to scientific medicine led to the establishment of the Council, had found their lodgment in most of the pharmaceutical houses. It was a genuine disappointment to the Council to find that some of the large and old-established firms were not only unwilling to cooperate with the Council, but in many instances exhibited a definite antagonism to the Council's work.

"The object—and duty—of the officers of pharmaceutical houses is primarily to pay dividends to their stockholders. Through skilful advertising or the persuasiveness of "detail men," they are able to induce physicians to prescribe their controlled products, on which there are large profits, even though such products have not only not been accepted by the Council, but, in many instances, have been disapproved. Is it any wonder that concerns which put out such products are indifferent or openly antagonistic to the work of the Council? The matter is largely one of business policy. When the medical profession as a unit will support the Council in its work, then such firms will find it good business policy to accede to Dr. Bevan's suggestion—but not before."

Evidently the problem resolves itself into this: The Council, constituted of scientific men, working without remuneration in the interest of scientific medicine and the medical profession, expects—and rightfully—the cooperation and support of the members of that profession. What is needed, therefore, is the active, sympathetic cooperation of physicians; the cooperation of pharmaceutical houses will follow as a matter of course.

### THE PROPAGANDA DEPARTMENT

The interest of the profession and the public in the work of the Propaganda department is increasing. During the past year the department has received more inquiries from newspapers regarding medical "copy" than ever before, and has also had an unusually large number of inquiries relative to itinerant quacks. Data were furnished which, in many instances, sufficed to bring action that materially protected the public; in some instances the information was used as the basis of legal action against the quacks. The department also has answered a remarkably large number of inquiries from schools and colleges, due to the attention that teachers are giving to the nostrum evil, and to the knowledge they have of the availability of the Propaganda department's educational material. More than the usual number of inquiries has been received regarding those "patent medicines" whose most potent ingredient is alcohol. The pamphlets, educational posters and stereopticon slides that are prepared and issued by the Propaganda department continue in active demand. One of these pamphlets was considered of sufficient importance to be introduced into the records of a government committee that was considering a bill designed to restrict advertisements relating to the treatment of venereal diseases and of certain sexual disorders. A new edition of "Nostrums and Quackery" is in the hands of the printers and will be issued shortly. This department of THE JOURNAL continues to justify its existence. As a clearing house for information on the subjects with which it deals it proves a boon alike to the profession and the public.

### INCREASED EXPENSES

The steadily increasing cost of production is likely to cause serious concern if it continues much longer. As an illustration we might refer to the price of paper used in THE JOURNAL. A reference to the auditor's report for 1918 will show that paper for THE JOURNAL that year cost approximately $162,000. Last year—1919—it was over $217,000—an increase over the preceding year of approximately $55,760. There was an increase in circulation, but this was small as compared with the increase in cost of paper. We entered this year with a still further increase; at the lowest estimate, our paper for the current year will cost in the neighborhood of $35,000 more than last year, even though there should be no further increase. Wages in the printing trade are still advancing; an increase that went into effect last February, 1920, adds at least $22,000 to the pay in the printing department. The increase in these two items alone—paper and labor in the mechanical department—will add at least $57,000 to the expense this year. In addition there is a steady increase in the wages for all the other help—stenographers, typists, clerks, etc.

While there is no immediate cause for anxiety it is well for us to realize that we must be prepared for whatever the future may have in store. It may be necessary either to increase the subscription price of THE JOURNAL—say $1.00 a year—or to reduce its size. However, this is for the future. Your attention is called to these matters that you may know the conditions that have developed and which are developing.

### HOSPITAL STANDARDIZATION

At the meeting of the Association in Atlantic City in 1919 the House of Delegates adopted the following resolution, which was presented by the Reference Committee on Reports of Officers:

"That the Trustees be instructed to establish a Council on Hospitals as an independent body, or a Bureau on Hospitals as a body subsidiary to one of the already existing councils, the details of the organization to be left to the Trustees with power to act."

In reference to this action of the House of Delegates the Board desires to place before you the following facts: For

many years the work of the Council on Medical Education has necessarily embraced the accumulation of data relating to hospitals. This phase of the Council's work gradually increased in importance to a degree that two years ago it was found necessary to create in the office a special section on hospitals—which, in reality, is a bureau of the Council on Medical Education—having hospital work particularly in charge. The efficient secretary of the Council on Medical Education has directed this work both before and since the bureau was established. During the last seventeen years a vast amount of valuable information concerning the hospitals of the country has been obtained by means of personal inspection, correspondence, answers to questionnaires sent to members of attending staffs, officers and ex-interns of hospitals, and in this work the secretary has sought and obtained the splendid cooperation of the component county and state medical societies. The data so obtained have been recorded, indexed and filed in the office of the Association, and have been the basis of the lists of hospitals published in the directory, and lists of hospitals approved for intern training which, since 1914, have been widely distributed. The character and the great utility of the data on file are further shown in the reports of the Council on Medical Education to the House of Delegates for the last several years, and particularly in the reports for 1919 and for this year.

Your attention is directed also to the fact that the standardization of hospitals is intimately related to medical education. The extensive means within the jurisdiction of the Association, which may be utilized to advance and maintain the standards of medical education, may be, and in fact are being used coincidently to standardize hospitals. These means include those resources of the Association embraced in its organized personnel and well-equipped office, its many and varied files and indexes of information relating to the medical profession, and its command of the cooperative influence of its membership as represented in the constituent state and county societies—resources which make unnecessary the expenditure of extremely large sums of money.

In this connection your attention is directed to the fact that, comparatively speaking, the Association has never spent a large sum of money annually for the standardization of medical education. The great things accomplished have come about through the sentiment created in the public mind through annual conferences and by the publication of statistics relating to medical education and business and the resultant support of the members of the Association of the policies, educational standards and classifications put forward by the Council on Medical Education.

Experience has shown that work worth while, such as has been accomplished by each of the various Councils of the Association, has depended largely on one man. With no desire to belittle the splendid advice and assistance of the members of a Council who are responsible to the Association for the adopted policies, minimum standards of work and methods of procedure, after all the real responsibility for efficiently carrying out the program and for the collection and compilation of the accumulated data rests chiefly on its secretary acting with the related personnel of the Association headquarters under the direction of the General Manager.

Therefore we are of the opinion that the work which the Association may most efficiently and fruitfully carry on in the standardization of hospitals is provided for in the bureau already created in the office and under the jurisdiction of the Council on Medical Education. This opinion is justified also by the fact that the present industrial unrest with the increasing cost of labor, in all departments, the high price of the necessities of life and of the materials needed in productive commercial pursuits, demand the utmost economy, consistent with efficient production in the management of the affairs of the Association.

In conformity with the statements made above, the Board of Trustees recommends to the House of Delegates the change in name of the "Council on Medical Education" to the "Council on Medical Education and Hospitals." In view of the fact that no existing organization has the legal power to standardize hospitals, the Board recommends that the House of Delegates direct the Council on Medical Education to substitute the term of "approved hospitals" for that of "standardized hospitals" in its official reports and publications.

In the addenda are statistics in tabular form covering the circulation of THE JOURNAL, etc.; the treasurer's statement, and the complete auditor's report. No reference is here made to the work of the various councils—the Council on Health and Public Instruction, the Council on Scientific Assembly, the Judicial Council and the Council on Medical Education—as these Councils will make complete reports direct to the House of Delegates.

Respectfully submitted,

FRANK BILLINGS. A. R. MITCHELL.
THOMAS McDAVITT. H. BERT ELLIS.
D. CHESTER BROWN. OSCAR DOWLING.
WENDELL C. PHILLIPS. W. T. SARLES.
PHILIP MARVEL.

## Addenda to Trustees' Report

### SUBSCRIPTION DEPARTMENT

The regular weekly issue of THE JOURNAL of the American Medical Association from Jan. 1, 1919, to Dec. 31, 1919, inclusive (52 issues), was as follows:

| | | | | | |
|---|---|---|---|---|---|
| January 4 | 68,466 | | July 5 | 72,163 | |
| January 11 | 67,738 | | July 12 | 72,292 | |
| January 18 | 67,053 | | July 19 | 73,113 | |
| January 25 | 67,828 | | July 26 | 72,169 | |
| | | 271,085 | | | 289,737 |
| February 1 | 67,979 | | August 2 | 72,182 | |
| February 8 | 68,617 | | August 9 | 72,769 | |
| February 15 | 68,500 | | August 16 | 72,615 | |
| February 22 | 68,872 | | August 23 | 72,692 | |
| | | 273,968 | August 30 | 72,333 | |
| | | | | | 362,591 |
| March 1 | 68,806 | | | | |
| March 8 | 69,120 | | September 6 | 72,259 | |
| March 15 | 69,062 | | September 13 | 72,436 | |
| March 22 | 69,672 | | September 20 | 72,473 | |
| March 29 | 72,627 | | September 27 | 73,737 | |
| | | 349,287 | | | 290,905 |
| April 5 | 73,300 | | October 4 | 73,232 | |
| April 12 | 70,425 | | October 11 | 73,797 | |
| April 19 | 71,488 | | October 18 | 74,026 | |
| April 26 | 72,530 | | October 25 | 73,906 | |
| | | 287,743 | | | 294,962 |
| May 3 | 72,649 | | November 1 | 74,753 | |
| May 10 | 76,312 | | November 8 | 74,227 | |
| May 17 | 72,610 | | November 15 | 75,043 | |
| May 24 | 71,715 | | November 22 | 76,092 | |
| May 31 | 73,183 | | November 29 | 76,539 | |
| | | 366,469 | | | 376,654 |
| June 7 | 72,260 | | December 6 | 77,022 | |
| June 14 | 72,112 | | December 13 | 77,016 | |
| June 21 | 72,449 | | December 20 | 76,935 | |
| June 28 | 72,157 | | December 27 | 76,999 | |
| | | 288,978 | | | 307,972 |
| **Total** | | | | | **3,760,351** |
| **Weekly average** | | | | | **72,314** |

### PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL

The following table gives the number of physicians in the United States (based on the sixth edition of the American Medical Directory), the number receiving THE JOURNAL, and the approximate percentage in each state. It does not include copies sent to physicians in the United States Army, the United States Navy or the Public Health Service:

| State | Number Receiving JOURNAL | Physicians in State 6th A. M. Dir. | Approx. Percentage 6th A. M. Dir. |
|---|---|---|---|
| Alabama | 758 | 2,530 | 29 |
| Arizona | 262 | 333 | 78 |
| Arkansas | 638 | 2,587 | 25 |
| California | 3,491 | 5,929 | 61 |
| Colorado | 979 | 1,713 | 57 |
| Connecticut | 1,071 | 1,701 | 63 |
| Delaware | 129 | 264 | 49 |
| District of Columbia | 639 | 1,237 | 51 |
| Florida | 510 | 1,296 | 39 |
| Georgia | 1,084 | 3,442 | 31 |
| Idaho | 239 | 458 | 52 |
| Illinois | 6,961 | 11,095 | 62 |
| Indiana | 1,894 | 4,765 | 39 |

| State | Number Receiving JOURNAL | Physicians in State 6th A. M. Dir. | Approx. Percentage 6th A. M. Dir. |
|---|---|---|---|
| Iowa | 2,037 | 4,004 | 50 |
| Kansas | 1,230 | 2,668 | 46 |
| Kentucky | 1,102 | 3,483 | 31 |
| Louisiana | 786 | 2,060 | 38 |
| Maine | 481 | 1,179 | 40 |
| Maryland | 1,217 | 2,268 | 53 |
| Massachusetts | 3,469 | 5,926 | 58 |
| Michigan | 2,402 | 4,598 | 52 |
| Minnesota | 1,706 | 2,566 | 66 |
| Mississippi | 507 | 1,975 | 26 |
| Missouri | 2,355 | 6 063 | 38 |
| Montana | 336 | 661 | 51 |
| Nebraska | 1,103 | 1,960 | 56 |
| Nevada | 81 | 159 | 51 |
| New Hampshire | 365 | 666 | 55 |
| New Jersey | 1,777 | 3,153 | 56 |
| New Mexico | 202 | 456 | 45 |
| New York | 8,452 | 15,877 | 52 |
| North Carolina | 878 | 2,257 | 34 |
| North Dakota | 400 | 604 | 66 |
| Ohio | 3,751 | 8 099 | 46 |
| Oklahoma | 872 | 2,672 | 33 |
| Oregon | 545 | 1,157 | 47 |
| Pennsylvania | 6,608 | 11,495 | 57 |
| Rhode Island | 435 | 752 | 58 |
| South Carolina | 565 | 1,433 | 40 |
| South Dakota | 406 | 695 | 60 |
| Tennessee | 1.065 | 3,481 | 30 |
| Texas | 1,965 | 6,246 | 31 |
| Utah | 303 | 488 | 62 |
| Vermont | 258 | 653 | 38 |
| Virginia | 1,068 | 2,552 | 42 |
| Washington | 881 | 1,698 | 52 |
| West Virginia | 764 | 1,759 | 43 |
| Wisconsin | 1,703 | 2,817 | 60 |
| Wyoming | 151 | 254 | 60 |

The number of Fellows and subscribers on THE JOURNAL mailing list each year since, and including, 1900, is indicated below. Libraries, colleges, advertisers, exchanges, etc., are not included:

| Year | Fellows | Subscribers |
|---|---|---|
| January 1st, 1900 | 8,445 | 4,633 |
| January 1st, 1901 | 9,841 | 8,339 |
| January 1st, 1902 | 11,107 | 10,795 |
| January 1st, 1903 | 12.553 | 12 378 |
| January 1st, 1904 | 13,899 | 14 674 |
| January 1st, 1905 | 17.570 | 15,698 |
| January 1st, 1906 | 20,826 | 17,669 |
| January 1st, 1907 | 26,255 | 20.166 |
| January 1st, 1908 | 29,382 | 20,880 |
| January 1st, 1909 | 31,999 | 18 983 |
| January 1st, 1910 | 33 032 | 19.832 |
| January 1st, 1911 | 33,540 | 20,504 |
| January 1st, 1912 | 33,250 | 21,620 |
| January 1st, 1913 | 36.082 | 19.863 |
| January 1st, 1914 | 39,518 | 19,751 |
| January 1st, 1915 | 41,254 | 20 430 |
| January 1st, 1916 | 41,938 | 22.921 |
| January 1st, 1917 | 42,744 | 22,156 |
| January 1st, 1918 | 43,420 | 23,117 |
| January 1st, 1919 | 42,366 | 24.687 |
| January 1st, 1920 | 44,340 | 30,032 |

During 1919 there were transferred to Fellowship 2,118 from the subscription department, and 20 from THE ARCHIVES OF INTERNAL MEDICINE, THE ARCHIVES OF NEUROLOGY AND PSYCHIATRY and the AMERICAN JOURNAL OF DISEASES OF CHILDREN—a total of 2,138. Four hundred and twenty-one were discontinued as Fellows, but continued as subscribers.

## TREASURER'S REPORT

Report of the Treasurer of the American Medical Association for the year ended December 31, 1919.

### ASSOCIATION RESERVE FUND

| | | |
|---|---|---|
| Reserve Fund as at December 31, 1918 | | $208,727.38 |
| Investments | | 63,242.75 |
| Interest—Bonds | $10,959.96 | |
| Interest—Uninvested | 256.33 | |
| | | 11,216.29 |
| Reserve Fund as at December 31, 1919 | | $283,186.42 |
| Balance as at December 31, 1919 | | $ 265.34 |

### TREASURER'S GENERAL ACCOUNT
### DAVIS MEMORIAL FUND

| | |
|---|---|
| Balance as at December 31, 1918 | $ 3,651.80 |
| Interest received for the year | 110.36 |
| Balance as at December 31, 1919 | $ 3,762.16 |

## AUDITORS' REPORT

CHICAGO, January 19, 1920.

*To the Board of Trustees,*
*American Medical Association, Chicago, Illinois.*

*Dear Sirs:*

In accordance with your instructions, we have audited the accounts of the American Medical Association for the year ended December 31, 1919, and now submit our report thereon.

### SURPLUS ACCOUNT

The surplus at the beginning of the year amounted to $471,661.50, and the surplus at the end of the year amounted to $456,839.39, a decrease of $14,822.11, which may be accounted for as follows:

| | |
|---|---|
| Transfer to Reserve Fund | $ 63,621.71 |
| Less Net Gain on Operations | 48 799.60 |
| Net Decrease in Surplus | $ 14 822.11 |

The net decrease in surplus is spread over the assets and liabilities as follows:

| | | |
|---|---|---|
| Decrease in Assets: | | |
| Current Working Assets (Increase) | | $ 11,683.64 |
| Prepaid Expenses (Decrease) | | 1,713.69 |
| | | $ 9 969.95 |
| Less Decrease in Property and Equipment | | 20,908.89 |
| | | $ 10,938.94 |
| Add Increase in Liabilities: | | |
| Advance Payments on Publications | $ 3,524.63 | |
| Increase in Accounts Payable | 358.54 | |
| | | 3,883.17 |
| Net Decrease in Surplus as above | | $ 14,822.11 |

### FINANCIAL POSITION

The financial position of the Association as at December 31, 1919, is shown in the following statement:

ASSETS: BALANCE SHEET AS AT DEC. 31, 1919.

| | | | |
|---|---|---|---|
| Property and Equipment at Cost, less Depreciation: | | | |
| Real Estate and Buildings | | | $209,109.68 |
| Machinery | | | 48,850.62 |
| Type and Metals | | | 7,577.81 |
| Furniture and Equipment | | | 13 843.63 |
| Chemical Laboratory | | | 1 650.26 |
| Library | | | 817.95 |
| | | | $281,849.95 |
| Reserve Fund Investment | | | 283 186.42 |
| Current and Working Assets: | | | |
| Inventory of Materials, Supplies and Work in Process | | $52,621.41 | |
| Accounts Receivable: | | | |
| Advertising | $39,544.94 | | |
| Cooperative Medical Advertising Bureau | 5,633.36 | | |
| Reprints | 2,738.24 | | |
| Miscellaneous | 63,407.96 | | |
| | | 111,324.50 | |
| Directory | | 510.54 | |
| Cash in Bank and on Hand | | 24,788.77 | |
| | | | $189,245.22 |
| Prepaid Expenses: | | | |
| Insurance | | $ 611.31 | |
| Session — 1920 | | 293.19 | |
| | | | 904.50 |
| Total | | | $755,186.09 |
| LIABILITIES: | | | |
| Accounts Payable: | | | |
| Cooperative Medical Bureau | | $ 6 736.23 | |
| Sundry | | 112.87 | |
| | | | 6,849.10 |
| Advance Payments on Publications | | | 8,311.18 |
| Association Reserve Fund | | | 283,186.42 |
| Surplus | | | 456,839.39 |
| Total | | | $755,186.09 |

The balance sheet submitted, in our opinion, correctly reflects the financial position of the Association as at December 31, 1919, subject to provision for accrued interest, taxes and "Journal" subscriptions paid in advance, less subscriptions and memberships due and unpaid.

We examined the securities representing the investment of the Association Reserve Fund, and found them in order.

We verified the cash on hand by actual count and the cash in bank by certificates obtained from the Association's bankers. The following is a statement of the cash balances:

| | |
|---|---|
| Continental and Commercial National Bank | $ 21,331.06 |
| First Trust and Savings Bank (Treasurer's Account) | 265.34 |
| Cash on Hand | 3 042.37 |
| Cashier's Fund | 150.00 |
| Total | $ 24,788.77 |

### OPERATIONS

The operations of the Association for the year ended December 31, 1919, are shown in the following statements:

INCOME AND PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED DECEMBER 31, 1919

| | | |
|---|---|---|
| JOURNAL: | | |
| INCOME: | | |
| Fellowship Dues and Subscriptions | | $357,684.78 |
| Advertising | | 395,598.38 |
| Jobbing | | 13,291.14 |
| Books | | 12,835.69 |
| Reprints | | 4,589.67 |
| Insignia | | 2,251.40 |
| Miscellaneous Sales | | 8,627.33 |
| Interest | | 2,783.98 |
| Net Recoveries on Bad Debts | | 125.79 |
| | | $797,788.16 |
| Expenses, Schedule "1" | | 618,311.83 |
| Net Income from Journal | | $179,476.33 |
| MISCELLANEOUS INCOME: | | |
| Cooperative Advertising Bureau | $ 195.56 | |
| American Journal of Diseases of Children | 784.37 | |
| Archives of Internal Medicine | 1,692.82 | |
| Rent, Building "B" | 300.00 | |
| | | 2,972.75 |
| | | $182,449.08 |
| Association Expenses—Schedule "2" | $71,503.83 | |
| Less Rentals | 3,720.00 | |
| | $67,783.83 | |
| Miscellaneous Expenses—Schedule "3" | 65,865.65 | |
| | | 133,649.48 |
| Net Gain on Operations | | $ 48,799.60 |

JOURNAL EXPENSES—SCHEDULE "1"

| | |
|---|---|
| Wages and Salaries | $231,529.14 |
| Editorials, News and Reporting | 9,370.11 |
| Paper—Journal Stock | 217,625.86 |
| Paper—Miscellaneous | 7,767.81 |
| Electrotypes | 11,173.05 |
| Binding | 423.72 |
| Ink | 6,438.17 |
| Postage—First Class | 19,699.26 |
| Postage—Second Class | 32,738.27 |
| Journal Commissions | 8,232.05 |
| Collection Commissions | 1,155.73 |
| Discounts | 14,279.05 |
| Express and Cartage | 3,295.22 |
| Exchange | 3,179.25 |
| Office Supplies | 1,704.33 |
| Telephone and Telegraph | 1,005.96 |
| Office Jobbing | 5,311.67 |
| Miscellaneous | 11,951.10 |
| Power and Light | 3,992.66 |
| Fuel | 3,511.15 |
| Factory Supplies | 6,447.32 |
| Repairs and Renewals—Machinery | 4,486.33 |
| | $605,317.21 |

Depreciation:

| Property and Equipment | Rate | Amount | |
|---|---|---|---|
| Machinery | 15% | $8,620.69 | |
| Furniture and Equipment | 15% | 1,836.59 | |
| Factory Equipment | 15% | 559.33 | |
| Type | 15% | 616.44 | |
| Metal | 20% | 1,361.57 | |
| | | | 12,994.62 |
| | | | $618,311.83 |

ASSOCIATION EXPENSES—SCHEDULE "2"

| | |
|---|---|
| Association | $ 19,682.81 |
| Health and Public Instruction | 10,288.24 |
| Pharmacy and Chemistry and Chemical Laboratory | 18,760.70 |
| Medical Education | 13,081.87 |
| Organization | 2,627.02 |
| Therapeutic Research | 1,045.91 |
| Labaory Depreciation—10% | 183.36 |
| Building "A" Expense | 131.27 |
| Session 1919 | 5,702.65 |
| Total | $ 71,503.83 |

MISCELLANEOUS EXPENSES—SCHEDULE "3"

| | |
|---|---|
| Building "B" (New) Depreciation 5% | $ 7,973.98 |
| Building ("A" old to be razed) | 14,379.93 |
| Biographical Expense | 17,983.32 |
| Insurance and Taxes | 6,214.26 |
| Legal and Investigation Expense | 3,500.00 |
| Building "B" Maintenance | 1,334.56 |
| Cumulative Index | 1,787.12 |
| Depreciation Library—20% | 204.49 |
| Archives of Neurology and Psychiatry | 2,695.40 |
| Spanish Edition, Journal A. M. A. | 9,792.59 |
| Total | $ 65,865.65 |

The audit embraced an exhaustive test of the various sources of income and the verification of the cash disbursements with proper vouchers on file.

We are pleased to report that we found the accounting records to have been kept in the usual good order and that every facility was afforded us for the proper conduct of the audit.

Yours truly,

MARWICK, MITCHELL, PEAT & Co.

### Report of the Judicial Council

Dr. M. L. Harris, Illinois, Chairman, presented the report of the Judicial Council, which was referred to the Reference Committee on Report of Officers:

*To the Members of the House of Delegates of the American Medical Association:*

There have been no questions referred to the Council for adjudication during the past year. The two matters remaining in the hands of the Council from the last House of Delegates are the revision of the Constitution and By-Laws, and the further consideration of the feasibility of establishing some system of old age or invalidity insurance for members of the profession.

The Constitution and By-Laws as revised are herewith submitted.[1] At first glance it may seem that many radical changes have been made, but on closer investigation it will be found that such is really not the case. During the past few years of the evolutionary development of the Association, quite a number of changes have taken place in the character of the work done as well as in the manner of doing it, and some of these changes, although fully recognized, have not been clearly set forth in the By-Laws.

The Constitution, likewise, has failed to state correctly the character and form of the organization. The opportunity has been taken, therefore, to define the organization as it really is and has been since the reorganization in 1901. It will be noted that the verbiage has been changed in many places for the purpose of clarification and to eliminate ambiguity and duplications, but on comparison it will be found that there have been no changes made in principles or fundamentals.

Taken up more in detail, the first change noted in the Constitution is in the definition of the organization. The word "federacy," as defined in the American Dictionary and Cyclopedia, expresses correctly the character of the organization; hence this word has been used in defining it. Since the reorganization the Association has been a federacy, yet the fact has never been clearly set forth in the Constitution.

The objects of the Association have been expressed in the broadest and simplest manner possible. By omitting to mention a few of the things contained in the old Constitution under the title "Objects," we do not by implication eliminate a great many more things which the Association may do but which are not mentioned. In defining the objects of an association such as this, it is desirable to state them as briefly and as broadly as possible. The constituent associations and component societies are defined and the difference between members of the American Medical Association and Fellows of the Scientific Assembly made clear. The composition of the House of Delegates, together with its powers, are set forth, and the general officers of the Association defined.

There have been no material changes in the Scientific Assembly or the sections. No changes have been made in the section on "Funds," except to shorten it up slightly; likewise no changes in the method of amending the Constitution.

Concerning the By-Laws, it will be found that many paragraphs which were but duplications have been eliminated; likewise some sections which were already set forth in the Constitution and hence were but repetitions. Most of these are apparent at a glance, and as they add nothing to nor take anything from the present By-Laws, need not be further elaborated. There have been some changes made in the verbiage without changing the sense where it seemed that by so doing the meaning could be clarified.

As there are many points which are common to all of the standing committees or councils, these have all been grouped

1. These appear in the official handbook of the House of Delegates.

together to save repeating them under each council, thus materially shortening the sections on councils.

Much thought has been given to rewording the Constitution and By-Laws and it is felt that the changes made correctly express the conditions as they exist and that these instruments are now brought up to date.

### Old age And Invalidity Insurance

During the past year the Council has been collecting data on the subject of old age and invalidity insurance for members of the association. A brief questionnaire was sent to the secretary of every county medical society in the organization. The questionnaire asked for information as to the number of physicians in the county dependent on financial aid and as to how many of that number were members of the county medical society: the number over 65 years of age dependent because of age, with the age of each, if known: and the number under 65 dependent because of physical disability, with the cause of physical disability, if known. Reports were received from every state in the Union, and the reports covered 53.48 per cent. of the total number of physicians in the entire country, or 77,083 of the 144,116, the estimated total number of physicians in the country. One hundred and fifty-six were reported to be dependent on financial aid; 120 on account of old age, and thirty-six on account of physical disability. Only 42,824 of the 77,083 physicians reported on are members of the American Medical Association, and of this number seventy-seven or less than 0.2 per cent. were dependent. This gives an estimated number of 145 dependents out of a total membership of 81,239. There were no dependents reported in twenty-eight states, including the District of Columbia. Georgia heads the list with the largest number, namely sixteen out of 896 reported on, or 1.78 per cent. Rhode Island's report covered 100 per cent. of the members, while that of New York covered only 23 per cent., statistics from the city not being obtainable.

In studying these statistics, as incomplete as they may be, one is impressed with the remarkably small number of dependent physicians. It is quite likely that the number of physicians over 65 and unable to practice by reason of age and who have not been able to save a competence for their old age is much greater than that stated, but they are living with members of the family and hence not dependent on charity. The number under 65 who are dependent by reason of physical disability likewise seems rather low, and no doubt a more searching inquiry would increase the number of dependents due to old age as well as to physical disability. As so many of the states failed to report any dependents, even where a majority of the members were covered by the report, it would seem to the Council that the question of rendering financial aid should rest with the state organization and be treated as a local matter.

Respectfully submitted,

M. L. Harris, Chairman, Randolph Winslow,
I. C. Chase, William S. Thayer,
H. A. Black, A. R. Craig, Secretary.

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## Report of the Council on Health and Public Instruction

Dr. Victor C. Vaughan, Michigan, Chairman, presented the report of the Council on Health and Public Instruction, which was referred to the Reference Committee on Reports of Officers.

The report follows:

*To the Members of the House of Delegates of the American Medical Association:*

### Activities During the Year

Owing to the early date of the meeting this year, the time covered by the Council report is from May 1, 1919, to March 1, 1920, a period of ten months.

### Reorganization of Federal Public Health Activities

In its report for 1919, the Council stated that one of the more urgent needs in the present public health situation was increased knowledge regarding organized and official public health activities as a basis for constructive legislation. This is a work for which the Council is especially well fitted. In its report for 1914, the Council said, regarding the need of a careful study of the public health work of the federal government with a view to determining exactly what the federal government is doing and can do for public health: "The need for such an investigation hardly needs more than to be stated. The American Medical Association stands unreservedly pledged to the securing at the earliest possible moment of an adequate national health organization. In the discussion of this subject . . . a lack of accurate and complete information regarding present health activities on the part of the federal government has been apparent. Extreme claims have been made on both sides, one set of advocates asserting that the United States government was doing more for public health than any other national government in the world, the other asserting that practically nothing was being done by our government which could compare with the health activities of European nations. Such a condition is not credible to a scientific organization."

"This statement is true today. In addition, no careful study has ever been made, from a legal standpoint, of the exact limitations of the federal government along public health lines. What can the national government do under the constitution for public health? No one is today in a position to answer this question authoritatively. As a result, bills are drafted and measures proposed that would probably, if adopted, be unconstitutional, while such measures as the Harrison Narcotic Law, a law intended solely for the improvement of public health conditions in a broader sense, are passed ostensibly as revenue measures and are later by amendment converted into revenue producing measures with serious injustice and inconvenience to law-abiding physicians. If Congress has the power to regulate the sale of habit-forming drugs for the public good, then it is not necessary for Congress to pass such measures under the guise of revenue laws which after their passage are distorted and misconstrued by federal officials into unfair and inequitable revenue producing measures. This country will never have a federal department of public health such as has been advocated rather vaguely for fifty years past until the public health functions and powers of the federal government under the constitution have been definitely determined. Two questions must be answered: First, what can the federal government do for public health; and second, what is the federal government now doing for public health. These questions are not at present being considered by any other organization, yet their solution is fundamental to the development of public health in this country. They are problems to which the American Medical Association can fittingly and properly direct its attention. Having secured some authoritative information on these two questions, we will then be able to put the influence of the American Medical Association behind an intelligent movement for a national health organization."

Immediately preceding the Atlantic City session, the Secretary was asked to meet with the Executive Committee of the Association of State Health Officers for the purpose of discussing the reorganization of federal public health work. Later at a joint meeting of the Council and the Executive Committee of the State Health Officers an agreement was made to cooperate in endeavoring to secure a reorganization of federal public health agencies. A joint committee, consisting of the Chairman, the Secretary and Dr. W. S. Rankin from the Council, and Dr. S. J. Crumbine, Secretary of the State Board of Health of Kansas, Dr. C. St. Clair Drake, Director of Public Health in Illinois, and Dr. Allen W. Freeman, Commissioner of Health in Ohio, representing the Association of State Health Officers, was appointed to coordinate the work of the two bodies. After considerable correspondence, a conference was held at the Association headquarters in Chicago, July 28-30, 1919, at which were present the members of the Joint Committee, other members of the Executive Committee of the Association of State Health Officers and advisers on legal and technical questions.

After three days spent in discussing the details of the proposed reorganization and the essential provisions of a bill for this purpose, it was recognized that it was not possible to draft a satisfactory bill for the reorganization of the federal public health work until more information was available regarding the present public health activities of the federal government, what work was being done in the different departments, what appropriations were being made, how much was being spent, what was being accomplished, etc. It was realized that it would be impossible to draft a workable bill without authoritative and official information on these points. The possibility of the Council undertaking a survey of federal public health work was then discussed. Following the adjournment of the conference, this discussion was carried on by correspondence. Continued discussion of it led to the realization of the fact that any such survey carried on by private or unofficial agencies would neither be constructive nor authoritative and that such a study could be made only by a commission created by Act of Congress, authorized and empowered to summon before it the heads of the various bureaus and departments of the federal government, to call for official reports, estimates, records of expenditures, etc., and to carry on a systematic, official survey of the entire health work being done by the federal government, what reorganization and rearrangement was possible and advisable and how this could best be brought about. The Secretary and Dr. C. St. Clair Drake were appointed a Subcommittee to prepare a measure for accomplishing this purpose. Careful study of the situation in Washington, together with an inquiry into the legal and parliamentary questions involved, showed that the best form of securing the end sought was by means of a joint concurrent resolution. Such a resolution was accordingly drafted and introduced into the Senate by Hon. Joseph E. France of Maryland, as Senate Joint Concurrent Resolution 14, and into the House by Hon. E. E. Denison of Illinois as House Joint Concurrent Resolution 33. The resolution provides for a joint committee to consist of three members of the Senate and three members of the House "to make a survey of and report on those activities of the several departments, divisions, bureaus, offices and agencies of the Government of the United States which relate to the protection and promotion of the public health, sanitation, care of the sick and injured and the collection and dissemination of information relating thereto." The Committee is directed to report to Congress

1. The statutory powers and duties conferred by the Congress on any department, division, bureau, office or agency of the United States Government to carry on any work pertaining to the conservation and improvement of the public health, together with any rules and regulations authorized or promulgated thereunder;

2. The organization now existing in the Federal Government for the purpose of carrying out these powers and duties, together with the personnel of, appropriations for, and expenditures by each department, division, bureau, office, and agency during the fiscal year ended June 30, 1919;

3. The coordination now existing between said departments, divisions, bureaus, offices, and agencies, together with any conflict, overlapping, or duplication of powers, duties, functions, organization, and activities;

4. The cooperation and coordination now existing between the Government of the United States and the government of the several States or extragovernmental agencies for the conservation or improvement of the public health;

5. Such further information as such committee may deem proper;

6. Such recommendations as such committee may deem advisable to offer for the improvement of the public health work of the United States Government.

This resolution, which is short and easily understood, provides for the first time for a systematic study of the public health activities of the federal government as a basis for reorganization. The resolution passed the Senate December 20. It was, at the time this report was written, still in the Committee on Rules in the House, although there is a good prospect of its being adopted by the House at an early date.

At the New Orleans session of the American Public Health Association in October, 1919, one afternoon session was devoted to the discussion of this question, following which the American Public Health Association adopted a resolution unanimously endorsing the action of the joint committee, urging the passage of the resolution by Congress and authorizing the appointment of a committee to represent the American Public Health Association and to cooperate with the joint committee in securing the passage of this resolution. The committee appointed by the President of the American Public Health Association consisted of Dr. Haven Emerson, New York City, Dr. Charles V. Chapin, Providence, Rhode Island, and Mr. Lee K. Frankel of New York.

The formulation of this resolution providing for a congressional survey of federal public health work and the submission of recommendations for the reorganization, coordination and improvement of federal public health activities, constitutes for the first time in the history of this movement a definite, sound and practical program. In the furtherance of this program, the Council has enlisted the cooperation of the American Public Health Association and the Association of State Health Officers. The joint committee which has been created forms an effective means whereby the combined influence of the three organizations represented can be utilized for constructive public health work. The Council feels that for the first time in the history of the Association we are on the right track. It is hoped that the concurrent resolution may pass the House during the present session and the committee may be appointed to carry on its survey during the summer recess of Congress so as to report early in December. If this is not possible, then there are gratifying prospects of the passage of this resolution as soon as the new Congress convenes under a new administration.

### MEDICO-LEGAL WORK

In its report for 1919, the Council made the following statement regarding its previous work and plans on medicolegal lines:

"Another task taken up by the Council was a study of the legal relations and responsibilities of physicians and the legal aspects of public health. This field, for obvious reasons, has never been carefully studied either by physicians or lawyers. It offers no prospect of financial reward to lawyers and it is only of interest to physicians so far as their personal interests are involved in some specific case. The Secretary has for many years collected a large amount of material on this subject. One volume of a proposed four-volume set was issued in 1915, namely, "Digest of Supreme Court Decisions on Medical Practice Acts," in which were indexed 752 court decisions on this subject, 396 of which were abstracted. Work was begun and nearly completed on the second volume, "A Digest on the Medicolegal Relations of Physicians," for which approximately 1,800 supreme court decisions were collected and abstracted. This work can probably be completed and prepared for publication in a few months. In the field of malpractice, there are probably 1,500 cases on record which have gone to courts of last resort for opinions, while on the fourth subject, "The Powers and Duties of State Boards of Health," there are approximately 800 decisions on record. This work should be completed and published, as it comprises material that is not available in any other form nor through any other agency."

During the past year the second volume of the medicolegal series on "Medicolegal Relations of Physicians" has been completed and is now being prepared for publication. This digest contains 3,000 Supreme Court decisions on all the personal, legal relations of physicians except malpractice and will be of great value to the profession in affording authoritative information on many legal questions of vital importance to physicians. Plans are now being made for the compilation of the third volume on "Powers and Duties of Health Officers" which the growing work of municipal, county and state health departments has rendered imperative.

### Vital Statistics Legislation

In its report for 1919, the Council summarized the history of vital statistic legislation in this country showing that, in 1906, at the time that the Committee on Medical Legislation, the forerunner of the Council on Health and Public Instruction, took up this work in cooperation with the Division of Vital Statistics of the Bureau of the Census, there were only ten states in the Union that had any effective laws for the registration of deaths and only eight in which there was any birth registration, and that through the formulation of the model bill on vital statistics and the cooperation of the various organizations interested, the model bill had been adopted in the past fourteen years in all of the states except seven, viz., Alabama, Arizona, Delaware, Iowa, Nevada, South Dakota and West Virginia. During the past year, Alabama and Delaware have adopted the model law, leaving now only five states which are as yet without satisfactory legislation on this subject. These are Arizona and Nevada, in which no satisfactory system of registration has ever existed; Iowa and West Virginia, in which the old obsolete system of registration through county clerks still persists; and South Dakota, in which the Secretary of the State Historical Society is the Registrar of Vital Statistics which are collected and recorded as historical rather than public health data. In Arizona and Nevada, the model law should be adopted at the next session of the legislature. In the other three states such amendments to the existing law should be adopted as will render these states eligible to admission to the Registration Area of the United States Census. This work, which is absolutely essential for any modern public health work, should be completed at the earliest possible moment so that the Registration Area for Births and Deaths in this country will include the entire country.

The House of Delegates has repeatedly endorsed the model law and has repeatedly urged its adoption on the various state associations. This support has been of the greatest assistance in securing the passage of these laws in the different states. In order that this work may be completed, the Council requests the House of Delegates to reaffirm its endorsement of the model law and to urge the state medical associations in Arizona, Iowa, Nevada, South Dakota and West Virginia to take the lead in educating public opinion in these states and to endeavor to secure at the next session of their legislature the adoption of such measures as will bring their states into the Registration Area in harmony with the rest of the country.

### Committee on Protection of Scientific Research

The Committee on Protection of Scientific Research which has done such excellent work in the past in educating the public and in preventing the passage of legislation restricting scientific investigation has during the past year done one of the best pieces of work in its record. Senate Bill 1258, introduced by Senator Myer of Montana, while apparently only intended to forbid the use of dogs for experimental purposes in the District of Columbia, was in reality an opening wedge for general restrictive legislation. The bill was referred to the Judiciary Committee of the Senate and by this Committee was referred to a subcommittee consisting of Senator Norris of Nebraska, Chairman, Senator Colt of Rhode Island and Senator Ashurst of Arizona. Hearings covering several days were held in Washington the first week of November, 1919. The usual lobby of antivivisectionists, officers of antivivisection societies and others was present to urge the passage of the bill. The scientific side of the case was presented by an imposing array of distinguished scientific men under the leadership of Dr. Walter B. Cannon of Harvard Medical School. It is doubtful if any discussion of this question has ever been more brilliantly or convincingly conducted. The full report of the hearing published by the committee forms an interesting collection of scientific data as well as an exposition of the misstatements and fallacious arguments of the antivivisectionists. The bill has never been reported out of committee.

Soon after the organization of the original Committee on Defense of Scientific Research, a set of rules for the care of animals in scientific laboratories was formulated, printed and copies distributed to each medical college and scientific laboratory in the country with the request that they be posted and enforced. This voluntary action on the part of the medical profession for the regulation of any possible abuses in animal experimentation has proved one of the strongest arguments against the adoption of special legislation for this purpose. Although these rules are still being enforced, the length of time that has elapsed since their distribution made it advisable in the opinion of the Committee to print a new edition of the rules and send them out to all scientific laboratories. Copies of these rules with a circular letter have been sent to each of the eighty-five medical colleges and eleven additional laboratories. Requests for additional copies have been received from many of the laboratories and the rules have been posted and are being enforced now in practically all of the scientific laboratories throughout the country.

In addition to the series of twenty-eight pamphlets on Protection of Scientific Research prepared by the Committee and issued by the Council which has now become a standard series on this subject, two other pamphlets are now in course of preparation, one on the value of animal experimentation in the study of nutrition by Professor McCollum of Johns Hopkins University, and the other by Doctor Cannon, the Chairman of the Committee, summarizing the entire series and presenting in a single, concise pamphlet the entire case for scientific research, with special reference to the question as to why the dog is essential to scientific investigation.

### Committee on Conservation of Vision

At the annual meeting of the Council held on October 4, 1919, the following Committee on Conservation of Vision was appointed: Dr. Cassius D. Wescott, Chairman, Chicago; Dr. George S. Derby, Boston; Dr. George Edmund de Schweinitz, Philadelphia; and Dr. John E. Weeks, New York City. In addition to the twenty pamphlets now on hand forming the popular series on Conservation of Vision, two others are now under consideration, one on crossed eyes and one on cataract. The Chairman of the Committee and the Secretary of the Council have held several conferences with a committee from the American Optical Association with a view to the inauguration of a campaign for the education of the public on conservation of vision and the detection and correction of errors of vision, especially among schoolchildren and industrial employees. This plan which is developing rapidly will, if consummated, be financed by the American Optical Association and directed by a committee on which the Council and its Subcommittee will be represented.

### Committee on Cooperation with the National Education Association

This Committee which is at work on health problems in education was reorganized at the October meeting of the Council by the appointment of the following Committee: Dr. John M. Dodson, Chairman, Chicago; Dr. R. W. Corwin, Pueblo; Dr. George W. Goler, Rochester, N. Y.; Dr. Edward Jackson, Denver; and Dr. Henry L. K. Shaw, Albany, New York. Dr. Dodson, Dr. Corwin and Dr. Goler attended the annual meeting of the National Education Association in Cleveland on February 24. A fourth pamphlet in the series prepared by this Committee on the results of health conservation work in the rural schools is now in preparation.

### Committee on Social Insurance

This Committee, appointed by the Council in 1915 to carry on a study of social insurance in its relation to the medical profession, presented reports to the House of Delegates at the annual sessions of 1916, 1917 and 1919. No report was presented in 1918 owing to the fact that Doctor Lambert, the Chairman of the Committee, was in service in France. The House of Delegates each year has approved of the report of the Committee, and has directed it to continue its work. The House of Delegates has not as yet seen fit to commit the Association to any positive position on this question, evi-

dently feeling that the time had not yet come for the Association going on record either for or against social insurance. Members of the House of Delegates, of course, understand that the House of Delegates is the only body under the Constitution and By-Laws of the Association that has any power or authority to adopt any policy or commit the Association to any opinion on this or on any other question. Its determination lies entirely outside the jurisdiction of the Council. Evidently this fact is not clearly understood by many of our members, inasmuch as in the last few months statements have appeared in several of our state journals either in the editorial or correspondence columns criticizing the Council for failure to take a positive position against social insurance. Such criticism, of course, is entirely unwarranted as it is not the function of the Council to formulate the policies of the Association.

The failure of the Davenport bill to pass the New York legislature leaves no state in which this question is at present up for discussion in any concrete form, while the growing opposition of physicians and the increasing attention given to it in professional circles will probably prevent the passage of social insurance bills in any state without the medical profession being thoroughly informed and prepared to participate in the discussion of them. The objects which the Council had in view in creating this Committee, viz., to arouse the medical profession to a discussion of this subject and to prevent the premature adoption of any such measures in this country as in England without the full knowledge of the medical profession, have evidently been accomplished.

### Midwinter Conference

The regular Midwinter Conference on Public Health and Legislation was held at the Auditorium Hotel in Chicago on Thursday, March 4. Owing to the war, this was the first conference which the Council has held since 1917. In spite of this lapse of three years and of the fact that many state and municipal health officers were unable to attend on account of serious epidemics, the attendance was one of the largest and most gratifying that has been present at any of the conferences of the Council. Following the policy of making this Midwinter Conference a rallying point for other organizations, committees, councils, conferences, etc., an effort was made to concentrate as many meetings as possible in the week of the session. The Executive Committee of the State Health Officers, the Joint Committee of the Council, the State Health Officers Association and the American Public Health Association, the Executive Committees of the American Public Health Association and the National Tuberculosis Association and the National Association of Colleges and University Health Officers were all held in connection with the Conference. Plans are now under consideration for a more extensive Conference next year and for the centering of the greater number of our public health meetings and conferences at this time.

### Special Committees

The Council desires to bring to the attention of the House of Delegates a growing tendency to relapse into the conditions which existed before the creation of the Council in regard to the appointment of special and independent committees. Previous to the organization of the Council, there had developed during a number of years many independent and overlapping committees, each of which was endeavoring to functionate separately and independently and each of which was asking for appropriations to carry on its work. In order to concentrate all of the public health and public relation functions of the Association under a permanent and responsible Council, the House of Delegates in 1910 created the Council on Health and Public Instruction which took over all of these conflicting and independent committees. In the last few years there have been created several independent and uncoordinated committees for special purposes, usually in response to a motion of resolution introduced by some member of the House often without careful consideration of its relation to the existing executive machinery of the Association. Special committees appointed in the midst of the annual session are often hastily selected and without due consideration to the various factors deserving of recognition. Much better results are secured by the creation of such special committees as may be needed as subcommittees of one of the existing permanent boards or councils, selecting men carefully after due consideration to the needs of the situation. The Council, therefore, recommends that the House of Delegates, in taking action on subjects lying within the field of the Council, instead of creating special and independent committees, instruct the Council to appoint such committees and to inaugurate and carry on their work as a part of the Council activities.

### Increased Taxation Under the Harrison Law

In its report for 1919, the Council called attention to the increased registration tax for physicians under the Harrison law which had been increased from one to three dollars. The Council pointed out that this law was enacted by Congress to carry out our international obligations in compliance with the recommendations of the Shanghai Commission on the Control of Opium Traffic; that it was extremely doubtful whether Congress had any authority under the Constitution to regulate the importation and sale of a drug so long as the object of the regulation was the improvement of the public health or moral status of the people; and that in order to give Congress jurisdiction on this subject, the Harrison law, like the Esch phosphorus bill, had been put in the form of a revenue measure. The American Medical Association and its Journal cooperated heartily and cheerfully in the enactment of this measure, in the hope that it would be of material value in restricting the use of narcotic drugs to legitimate purposes. The medical profession of the country also accepted the imposition of a tax and the inconvenience of registration as its contribution to the operation of the law and as necessary accompaniments of any practical plan for the control of illicit traffic in habit forming drugs. The object of the law is not and never has been the production of revenue. The revenue feature is incidental and secondary. Yet in the revenue bill for 1918 the license tax for physicians under the Harrison law was increased from one to three dollars. Estimating the number of physicians in the United States at 150,000, this increase of two dollars a year forms an unwarranted and inequitable tax on physicians of $300,000 a year. A license law is no more effective with a three dollar license fee than with a one dollar fee. The only possible justification for the Harrison law is the public good. The expense of the operation of the law, therefore, should be borne by the public and not by a special tax levied on one particular class. While the increase in the tax on physicians might have been justified in 1918 as a war measure, now that the war is over there is no possible justification for its continuance. The Council, therefore, recommends that the House of Delegates record its emphatic disapproval of this exploitation of physicians and that it demand the reduction of the registration fee for physicians to a nominal amount for so long as the law remains in force.

### Regulation of Habit Forming Drugs

The Harrison law has now been in operation a sufficient length of time to afford a fair opportunity for determining its effectiveness. It must be admitted that it has failed of the purpose for which it was enacted, viz., the restriction of the use of habit forming drugs to legitimate purposes. While definite figures are lacking, it is estimated that there is at present imported each year into this country between four and five times as much opium as is needed for medical purposes. Reports indicate that efforts to enforce the law in the face of this oversupply of drugs have resulted in a marked increase in the illict distribution of opium, morphin, heroin, cocain and other inhibited drugs, while the extortion of unfortunate victims of drug habits has been made possible by the illegal methods under which the traffic is necessarily carried on. The enormous profits of illegal traffic in drugs has led to systematic efforts to increase the number of prospective customers while the opportunities for profits due to the dishonest enforcement of the law in differ-

ent localities has led to blackmail and official corruption. The present situation is exactly the same that would have resulted if a federal law had been passed forbidding the use of alcoholic liquors but leaving their manufacture and distribution unrestricted. The attempt to regulate the use of habit forming drugs and to restrict their use to legitimate purposes by a license law has evidently failed. Nothing but continued failure and scandal can result so long as it is possible to produce and bring into this country each year many times the amount of these drugs needed for legitimate purposes. The only effective method of control is by the government, through the U. S. Public Health Service, being given complete control of the importation and distribution of habit forming drugs, the forbidding of their manufacture or importation by any private individual or firm, the ascertaining of the approximate amount needed each year for legitimate purposes, the importation of this amount under government control and its distribution to properly qualified and registered persons through the Public Health Service with the requirement of strict accountability for all drugs issued. The Council recommends that it be instructed to inaugurate an investigation into (1) the amount of narcotic drugs required for each year for legitimate purposes; (2) the amount of narcotic drugs now actually imported into the country; (3) the devising of effective methods by which these drugs under proper government supervision may be restricted to legitimate uses.

The tabulation of the educational material printed and distributed by the Council, together with the work done by the headquarters office, is submitted herewith:

PAMPHLETS PRINTED FOR DISTRIBUTION FROM APRIL 23, 1919, TO MARCH 16, 1920

| | |
|---|---|
| Baby Welfare | 1,000 |
| Conservation of Vision Series | 1,000 |
| Minimum Health Requirements for Rural Schools | 10,000 |
| Protection of Research Series | 2,000 |
| Save the Babies | 65,000 |
| Sex Hygiene Series | 24,000 |
| Social Insurance Pamphlet XI | 5,000 |
| Summer Care of the Baby | 16,000 |
| What We Know About Cancer | 18,200 |
| What You Should Know About Tuberculosis | 8,500 |
| Why Should Births and Deaths Be Registered | 10,000 |
| Total | 160,700 |

| | |
|---|---|
| Anthropometric Tables | 2,000 |
| Record Sheets | 2,000 |
| Score Cards | 10,000 |
| Total | 14,000 |

OFFICE WORK

| | |
|---|---|
| Letters Received from April 23, 1919, to March 15, 1920 | 3,892 |
| Letters Written from April 23, 1919, to March 15, 1920 | 4,442 |

SOURCES OF REQUESTS FOR INFORMATION

| Source | Number |
|---|---|
| Attorneys | 6 |
| Boards of Education | 5 |
| Boards of Health | 43 |
| Clubs | 5 |
| Federal Departments | 22 |
| Hospitals, Sanitariums, etc. | 23 |
| Libraries | 72 |
| Ministers | 27 |
| Nurses | 72 |
| Other associations, organizations, etc. | 58 |
| Physicians | 374 |
| Publications | 7 |
| Universities, colleges, schools, etc. | 97 |
| Young Mens and Young Womens Christian Associations | 12 |
| Miscellaneous | 818 |
| Total | 1,641 |

Respectfully submitted,

VICTOR C. VAUGHAN, Chairman,
WALTER B. CANNON,
WATSON S. RANKIN,
MILTON BOARD,
HAVEN EMERSON,
FREDERICK R. GREEN, Secretary.

## Report of Council on Medical Education

Dr. A. D. Bevan, Illinois, Chairman, presented the report of the Council on Medical Education, which was referred to the Reference Committee on Reports of Officers.

The report follows:

*To the Members of the House of Delegates of the American Medical Association:*

The functions of the Council on Medical Education are: 1. To make an annual report to the House of Delegates on the existing conditions of medical education in the United States. 2. To make suggestions as to the means and methods by which the American Medical Association may best influence favorably medical education. 3. To act as the agent of the American Medical Association in its efforts to elevate the standard of medical education. Having these functions in mind, the Council desires to submit the following report:

TABLE 1.—ENROLMENTS OF MEDICAL STUDENTS FOR SIX YEARS, SHOWING VARIATION IN NUMBERS BY CLASSES

| College Session | Freshmen | Sophomores | Juniors | Seniors | Totals |
|---|---|---|---|---|---|
| 1914-1915 | 3,373 | 3,919 | 3,675 | 3,884 | 14,891 |
| 1915-1916 | 3,582 | 3,694 | 3,559 | 3,727 | 14,022 |
| 1916-1917 | 4,107 | 3,117 | 2,866 | 3,674 | 13,764 |
| 1917-1918 | 4,283 | 3,521 | 2,993 | 2,933 | 13,630 |
| 1918-1919 | 3,104 | 3,587 | 3,272 | 3,089 | 13,052 |
| 1919-1920* | 4,909 | 2,760 | 3,206 | 3,267 | 13,564 |

* Estimate.

The single line drawn through the table underscores the figures which show the lowest ebb in the enrolment in the respective classes following the adoption of higher entrance requirements. The smaller number of freshmen in 1918-19 was due to enlistments in the World War. While the figures for 1919-20 are estimated they are fairly accurate since reports from all but a few colleges were obtained.

TABLE 2.—CAPACITY OF MEDICAL SCHOOLS UNDER LIMITED ENROLMENTS

| Medical Colleges | No. Colleges | Total Enrolment 1st Yr. | 2d Yr. | 3d Yr. | 4th Yr. | Average Total Enrolments per 4 Yrs. | Class |
|---|---|---|---|---|---|---|---|
| Enrolments limited | 16 | 1,139 | 1,121 | 1,151 | 1,151 | 4,559 | 285 |
| Report highest capacity with efficiency: | | | | | | | |
| 4-year colleges | 31 | 2,222 | 2,109 | 2,093 | 2,056 | 8,450 | 272 |
| 2-year colleges | 8 | 307 | 304 | ..... | ..... | 611 | 76 |
| Estimated highest capacity with efficiency: | | | | | | | |
| 4-year colleges | 10 | 430 | 430 | 410 | 410 | 1,680 | 168 |
| 2-year colleges | 3 | 65 | 65 | ..... | ..... | 130 | 43 |
| Totals, Class A colleges | 68 | 4,160 | 4,029 | 3,654 | 3,617 | 15,430 | 227 |
| Class B colleges: | | | | | | | |
| Capacity reported | 5 | 240 | 240 | 240 | 240 | 960 | 192 |
| Capacity estimated | 5 | 135 | 135 | 140 | 140 | 550 | 110 |
| Totals, Class B colleges | 10 | 375 | 375 | 380 | 380 | 1,510 | 151 |
| Totals, A and B colleges | 78 | 4,535 | 4,404 | 4,034 | 3,997 | 16,940 | |

### I. PRESENT STATUS OF MEDICAL EDUCATION

In 1906, the United States had 162 medical schools, or over half the world's supply. The number has been reduced, largely by the merging of from 2 to 5 medical schools in each of various cities, until now there are 86. Although the number is reduced, the character has been greatly improved. Of the 86 now existing, 77 are regular or non-sectarian; 5 are homeopathic; 1 is eclectic and 3 are nondescript affairs, 2 of which are semi-osteopathic and the third is not recognized in its own state (Missouri).

Since 1906 the proportion of medical schools requiring college work for admission increased from only 4, or 3 per cent. of the 160 medical colleges, to 79 or 92 per cent. of the 86 colleges now existing. The changes in this respect are shown in Chart 1.

Through the reduction in the number of medical schools and the adoption of higher entrance requirements, a material

reduction in the number of medical students was expected. The total has been reduced from 28,142 in 1904 to 13,052 in 1919 but the quality of the students has been very largely improved.

During the present college session the enrolment is approximately 13,554 students, or about 500 more than were enrolled a year ago. As shown by Table 1, the lowest ebb in enrolments following the adoption of higher requirements has been passed and a rapid return to larger enrolments is to be expected.

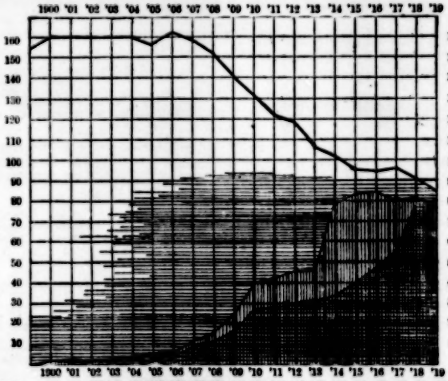
### EFFECT OF PRELIMINARY REQUIREMENTS ON STUDENT ENROLMENT

Early in the campaign for higher requirements of preliminary education some feared that medical schools would be unable to secure students. A reduced enrolment in the first session naturally followed the adoption of the higher requirements but in subsequent sessions, in all the better medical schools, enrolments have returned to normal proportions. The present enrolments in freshman classes in most schools greatly exceed those of the previous years. Furthermore, the enrolments in premedical classes show that still larger numbers will begin the study of medicine in the next two years. It is important, therefore, that only those be admitted who are well qualified to study medicine. Scholarships are being rapidly established so that few students need be barred because they are lacking in money.

The present enrolment in all medical schools based on returns from the majority of institutions is estimated at 13,554, an increase of 502 over the total enrolment in 1919. It is evident, therefore, that following the enforcement of higher standards for admission, the low mark in the number of matriculations has been passed, and that higher enrolments in subsequent years may be expected.

CHART 1.—MEDICAL SCHOOLS AND ENTRANCE REQUIREMENTS

The heavy line at the top shows the total numbers of medical schools existing in the various years. The horizontal shading (indefinite) shows those requiring for admission a four-year high school education; the vertical shading those requiring one year of college work and the heavy shading those requiring two years of college work.




| | 1900 | '01 | '02 | '03 | '04 | '05 | '06 | '07 | '08 | '09 | '10 | '11 | '12 | '13 | '14 | '15 | '16 | '17 | '18 | '19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Totals | 160 | 160 | 160 | 160 | 160 | 158 | 162 | 159 | 151 | 140 | 131 | 132 | 118 | 107 | 100 | 98 | 95 | 95 | 90 | 85 |
| Totals (a) | 158 | 158 | 158 | 157 | 156 | 153 | 156 | 148 | 135 | 116 | 91 | 80 | 72 | 60 | 24 | 12 | 10 | 10 | 9 | 6 |
| Totals (b) | .. | .. | .. | .. | .. | .. | 1 | 2 | 5 | 8 | 13 | 14 | 16 | 16 | 44 | 44 | 38 | 30 | 1 | .. |
| Totals (c) | 2 | 2 | 2 | 3 | 4 | 5 | 5 | 9 | 11 | 16 | 27 | 28 | 30 | 31 | 34 | 40 | 47 | 56 | 80 | 79 |

Figures show (a) those requiring for admission a high school education *or less*; (b) those requiring one year of college work; (c) those requiring two or more years of college work.

### LIMITATION OF ENROLMENTS

The limitation of enrolments by some medical schools and the excessive numbers of premedical students have caused some alarm lest medical schools may not have room for all the well qualified students who apply. An investigation (see Table 2) shows that the 16 Class A medical schools which have limited their enrolments can care for 4,559 students. Thirty-nine medical schools report that their maximum capacity with efficiency of teaching would enable them to care for a total of 9,061 students. An estimate based on the inspection of 13 Class A medical schools from which no reports were received shows they can enroll and properly train altogether about 1,810 students. The 68 medical schools in Class A, therefore, could enroll without overcrowding 15,430 medical students or about 1,500 more than are at present enrolled (13,554 est.) in the 85 medical schools of the United States. By securing more teachers; by the enlargement of laboratories, and by the completion of college buildings already planned or in course of construction, the numbers of medical students who can be satisfactorily taught could be further increased to 17,000 or 18,000 students.

The existing medical schools, therefore, are more than adequate to meet present needs, and in future as the numbers of students may increase, ample provision can be made for them.

It is the duty of the better medical schools to enlarge their facilities so as to care for as many students as possible, since otherwise many well qualified students will be forced into poorer schools.

### THE AMERICAN STANDARD OF MEDICAL EDUCATION

The standard of medical education as it has developed in this country, and which may be called the American standard consists of:

(*a*) Two years of premedical college work.

(*b*) Four years in an acceptable medical school, and

(c) A year's internship in an approved hospital.

Of the 86 colleges, as shown in Chart 1, 78 now require for admission 2 years of college work in addition to a four-year high school education. The admission requirements to medical schools in the United States are now on a par with those in other leading countries.

The Council's "Ideal Standard," adopted in 1905, urged medical schools to require for admission a year of college work, including courses in physics, chemistry and biology, this work to be obtained either in a college of arts and sciences or in the medical school. A special committee of the Council in 1907, however, found that most colleges of arts and sciences did not favor disarranging their schedules so to give in a single year three sciences which included laboratory work. Medical schools which were departments of universities proceeded rapidly to require two years of college work for admission. A few medical schools established premedical courses, but in no instance was the work given in a satisfactory manner. It was soon evident that the Council's one-year requirement should be merely a stepping stone to the two-year standard. Since Jan. 1, 1918, therefore, in accordance with instructions from the House of Delegates in June, 1916, the requirement of two years of college work for admission has been an essential for the Class A rating. Only one medical school is now offering a premedical science course. All others are requiring that the work be taken in colleges of arts and sciences.

The advantages in requiring that the premedical work be taken in approved colleges of arts and sciences are:

(1) The physics, chemistry and biology are taught without reference to their special bearing on medicine. It is not known today what particular facts obtained in the study of these sciences will be most useful in the medical research of tomorrow.

(2) The quality of the premedical work is assured since it is obtained in reputable colleges of arts and sciences in the course leading to the degree of Bachelor of Science. This provides also a satisfactory standard for measuring the value of irregular or so-called "equivalent" courses.

(3) The student is left free to make a final choice of his life work until he is best qualified to do so. He may have medicine in mind when he enters the university but he enters the classes working for the Science degree. He has a chance to compare notes with those studying for other callings and may find that he is better fitted for some other occupation or profession than medicine. If so, he can make the change without any loss of time (see Chart 2) since his premedical courses are equally acceptable toward other callings. Had he enrolled immediately in a premedical course of a medical school and then desired to change to some other profession it might be at the loss of one or more years spent in premedical work. This freedom of choice is of great importance since reports show that from 10 to 30 per cent. of "premedical" students change to some other calling before their two-year course is completed.

(4) Students now enter medical schools with the benefit of two years under the college influence and atmosphere, the contact with students in other departments, the social life, and the athletics, which are bound to affect their entire lives.

(5) The arrangement is a safeguard against medical cults. A student who, in a reputable college, has studied genuine science in his courses in physics, chemistry, and biology will seldom be misled by the fallacious claims advanced by unscientific cults.

The one disadvantage of the arrangement is the lack of uniformity in the courses in physics, chemistry and biology given in different colleges or universities. Efforts are now being made to correct this defect.

### THE HOSPITAL INTERN YEAR

This part of the Council's educational standard, adopted in 1905, is largely taking care of itself. For many years a large majority of medical graduates have voluntarily secured internships in medical hospitals and the proportion has rapidly increased since ten state licensing boards have required internship as an essential qualification for the license. These states are Pennsylvania, New Jersey, Alaska, Rhode Island, North Dakota, Washington, Illinois, Michigan, Iowa and Texas.

Eleven medical colleges have adopted the requirement of a fifth year to be spent by the intern in an approved hospital before the M.D. degree will be granted. Many more hospitals are now seeking interns than can ever be supplied by medical schools. This gives the college the opportunity to select for its students those hospitals which are considered in best position to furnish adequate intern training. Under the method devised by Rush Medical College of Chicago, the faculty arranges with some member of the attending staff of each approved hospital to report at regular intervals regarding the work done by the intern. Through reports from the interns also information in regard to the character of the hospital is obtained. A somewhat similar scheme is reported as working out fairly well at the University of Minnesota Medical School also. The colleges which have adopted the intern year as a requirement for the M.D. degree and the years when the requirement became, or becomes, effective are given in the accompanying table.

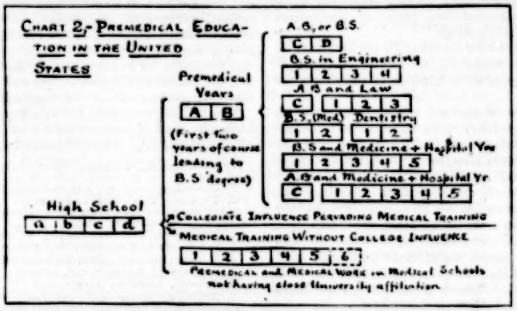


CHART 2.—PREMEDICAL EDUCATION IN THE UNITED STATES
Premedical Years
A B
(First two years of course leading to B.S. degree)
High School
a b c d
A B, or B.S.
C D
B.S. in Engineering
1 2 3 4
A B and Law
C 1 2 3
B.S. (Med.) Dentistry
1 2 1 2
B.S. and Medicine + Hospital Yr
1 2 3 4 5
A B and Medicine + Hospital Yr
C 1 2 3 4 5
COLLEGIATE INFLUENCE PERVADING MEDICAL TRAINING
MEDICAL TRAINING WITHOUT COLLEGE INFLUENCE
1 2 3 4 5 6
Premedical and Medical Work in Medical Schools not having close University affiliation

This chart shows (a) that the student is under the influence of college life and atmosphere during his two premedical college years; (b) that he is not required to make a final decision in regard to his life work until he has finished all premedical work, and (c) that at any time he can change to some other calling without difficulty.

| | Affects Matriculants | Affects Graduates |
|---|---|---|
| University of Minnesota Medical School | 1910-11 | 1915 |
| Leland Stanford Junior Univ. School of Med. | 1914-15 | 1919 |
| Rush Medical College (University of Chicago) | 1914-15 | 1919 |
| University of California Medical School | 1914-15 | 1919 |
| Northwestern University Medical School | 1915-16 | 1920 |
| University of Vermont College of Medicine | 1915-16 | 1920 |
| University of Illinois College of Medicine | 1917-18 | 1922 |
| Loyola University School of Medicine | 1917-18 | 1922 |
| College of Phys. and Surgs., Los Angeles | 1918-19 | 1923 |
| Columbia Univ. Coll. of Phys. & Surgs., New York | 1918-19 | 1923 |
| Detroit College of Medicine and Surgery | 1919-20 | 1924 |

#### SUPPLY OF HOSPITAL INTERNS

There is a real demand for medical graduates to serve as interns in hospitals, but this demand could not be met even if the number of medical colleges and the number of graduates annually should be doubled or trebled. The number of hospitals seeking interns has been tremendously increased and new hospitals are rapidly being erected. Last year 1,126 hospitals, with a total of 270,000 beds, were using or seeking interns. Counting that one intern is needed for every thirty beds, these hospitals would require 9,000 interns each year—more than three times the number of medical graduates in 1919! No such number of graduates is necessary to meet the normal demand for physicians. The intern problem requires some other remedy:

(*a*) The internship might be extended to two years by which the annual output of graduates would supply twice as many hospitals.

(*b*) The hospitals might pay salaries to recent graduates inducing them to remain for several years as resident physicians or surgeons.

(*c*) Hospital assistants or nurses might be trained to do much of the work now devolving on the intern—as suggested by Dr. Goldwater.

(*d*) The situation is relieved in some hospitals by the employment of stenographers who, at the time the patients are examined, take down histories from dictation by the members of the attending staff.

Meanwhile, the number of hospitals is now so large that only those will be able to secure interns which are willing to furnish a valuable clinical training.

#### NO SCARCITY OF PHYSICIANS; NEED BETTER DISTRIBUTION

A tabulation prepared in August, 1919, shows that the United States has one physician to every 720 people as compared to one to 1,500 in Great Britain. Investigation shows that, with a few exceptions, the demands made for physicians come from the sparsely settled districts in which it would be difficult for a physician to make a living.

The main difficulty is the imperfect distribution rather than a shortage of physicians. Meanwhile, the medical care for rural districts is being gradually improved through better roads, the use of automobiles, interurban railways, telephones and other like improvements. These are enabling the patients in rural districts to obtain more readily the services of physicians in nearby cities.

The Council on Medical Education is now making another survey of all medical schools, the purpose being to ascertain the present problems in medical education. This survey is revealing many changes since 1904; new buildings, more and better equipped laboratories, many more full-time teachers, greatly increased financial resources, closer relations with hospitals and dispensaries, more abundant clinical facilities and greatly improved methods of clinical teaching are everywhere in evidence. The very radical improvements in certain

particulars cause the present conditions to stand out in strong contrast to those found in the Council's survey in 1906.

### EXIT THE UNEQUIPPED MEDICAL COLLEGE

About 40 of the 162 medical schools existing in 1906 were without laboratories and without clinical material, yet in 1907 each of these institutions turned out from 12 to 105 graduates. Now most of the medical schools have from five to fifteen well equipped laboratories, and there is not one which does not have at least three laboratories. As to clinical material most medical colleges now actually own or control a teaching hospital, while there is not one which does not have relationship with a hospital in which at least amphitheater clinics can be held.

### INDEPENDENT MEDICAL SCHOOLS DISAPPEARING

Again private medical schools—those not having university connection—have largely disappeared. Now of the 85 medical schools, 66 are actually medical departments of universities and in 52 of these the universities have assumed full control not only of the entrance qualifications of the students admitted but also of the finances and the methods of teaching, so that the academic spirit of the university now pervades the medical school also. Of the 68 Class A medical schools, 60 are departments of universities. The influence of university life has been largely increased since now the students have obtained two years of premedical preparation in the liberal arts college.

Of the 85 medical colleges now existing 70 are in Class A, 8 are in Class B and 8 in Class C. Of the 70 in Class A, 59 give the complete four-year course, while 11 offer only the first two years.

When the present survey of medical schools is completed, the Council is planning a revision of its classification. There is, at present, a wide variation between the highest and the lowest of the medical schools now rated in Class A. It is contemplated, therefore, that a subdivision of the Class A group be made, placing the 25 or 30 medical schools which come up to a definite standard in a Class A+, and leaving in A those which are doing sufficiently good work that they can be recommended to all state licensing boards. Certain medical schools which are found seriously deficient will have their rating changed to Class B. It is expected that this subdivision of the present Class A group will lead those rated in A to bring about further improvements.

## II. MEASURES OF IMPORTANCE IN MEDICAL EDUCATION

The second function of the Council was to suggest the means and methods by which the American Medical Association can best influence favorably medical education. In this connection we submit the following:

### IMPROVING HOSPITAL SERVICE

The Council has given a great deal of careful study to the conditions underlying hospital service which is clearly one of the most important problems now confronting the medical profession, and is convinced that the American Medical Association with its constituent state societies is particularly well equipped to carry on this work. In this connection, the following statement will show the progress of the work in connection with hospitals conducted by the American Medical Association and its Council on Medical Education.

### HOSPITAL WORK OF THE AMERICAN MEDICAL ASSOCIATION

Since 1903, the American Medical Association has conducted a clearing house of information relating to all matters in which physicians are interested. This has included information relating to hospitals. From a small beginning the information has rapidly increased in quantity as have also the sources and methods of obtaining information. At first, the information consisted of data obtained through correspondence with physicians, references to articles relating to hospitals and hospital problems published in THE JOURNAL, references to books dealing with these problems, etc. As hospitals increased in numbers and as the demand for information increased, the means for obtaining data were also expanded so that, at the present time, the Association has under the Council on Medical Education, a definite Bureau on Hospitals, which in 1918 had a man who devoted part of his time to the work and for the last year another man has been engaged on full time. This work is intimately tied up with that relative to the many other lines of work carried on at the headquarters of the American Medical Association and especially with medical education, medical licensure, the biographical index and the medical directory. The bureau is aided by committees in the various states, representing the state medical societies, which, in turn, work in harmony with the county societies of their states.

This work of collecting information relating to hospitals and the furnishing of such information to those having need of it, therefore, has been a continuous but a constantly increasing work since 1903. There have been intervals, however, when special and more extensive efforts have been made to secure information in connection with hospitals.

In 1905, a closer relationship between the American Medical Association and hospitals was established when the Council on Medical Education urged that an internship be required as a part of the regular medical course. In 1905, also, the work with hospitals received an additional stimulus through the more detailed information which was obtained from all hospitals as a basis for the lists published in the American Medical Directory.

In 1912 a careful reinvestigation of all hospitals was made for the purpose of ascertaining which were in a position to furnish acceptable internships.[1] Such information as had been collected by the Council through reports from the hospitals, special questionnaires, etc., was submitted to the various state committees for verification. These committees did excellent work, and in several states inspections were made of most or all of the hospitals.

The following schedule was adopted in order that a uniform standard of measurement might be provided for the use of all committees. The outline follows:

1. Buildings and grounds; light; heat; ventilation; repairs; cleanliness, etc.
2. General supervision; superintendence, etc.
3. Trustees; ownership and general conduct; whether conducted in the interests of the community and scientific medicine, or solely for the profit of the attending staff.
4. Medical staff; its organization, character, etc.
5. Intern service: existence of; proportion of, to patients.
6. Nursing; training school for nurses; orderlies, etc.
7. Laboratory; roentgen ray, clinical, laboratory facilities, etc.
8. Records; histories; library, etc.
9. Out-patient department; emergency service; necropsies, etc.
10. Educational functions; teaching; research; influence on local profession, etc.

This general survey of 1912-1914, covered 2,224 hospitals having twenty-five or more beds and reports were received from 2,085, or 98.2 per cent. The reports provided more reliable and up-to-date information regarding all hospitals and enabled the Council in 1914 to publish in tabular form information relating to 852 hospitals which provided internships for 3,006 interns annually. A small, first edition of this tabulation was printed in February, 1914; it was submitted to the various state committees for revision and, after numerous corrections, was published in October, 1914. About 5,000 copies of this pamphlet were printed and circulated. The medical schools were provided with a sufficient number of copies so that each senior student could obtain one.

In a later general survey, that of 1915-1916, the committees of twelve states inspected all or most of the hospitals in those states. In Pennsylvania all hospitals were inspected by a committee of the Bureau of Medical Education and Licensure the chairman of which was a member of the State Advisory Committee on Hospitals. In New Jersey, also, all hospitals were inspected by a joint committee of the State Board of Medical Examiners and the state medical society. This committee also was the one appointed to cooperate with the Council on Medical Education. Based on the data thus obtained, a second revision of the list of hospitals providing internships was published in August, 1916. The list contained the names of 687 hospitals which provided 3,340 internships each year—more than could be filled by the number

1. The results of this investigation were presented at the annual conference of the Council on Medical Education in February, 1915, and the report including the personnel of the various state committees was published in the American Medical Association Bulletin, March 15, 1915, page 316.

of students being graduated annually. The demand for this pamphlet has been constantly increasing.

The records showed that the number of hospitals had been largely increased since the previous inspection and information brought to light a larger number of small, private hospitals, so that, all together, there were approximately 5,000 hospitals having twenty-five or more beds. It was seen that an era of hospital construction had already well begun which likewise called for larger facilities for the collecting and preparation of information relating to hospitals and hospital problems.

Early in 1918 the third general survey of all hospitals was begun. As in previous surveys, an abundance of information collected by the Council was sent to the state advisory committees for their guidance in the work. This information included: (*a*) Digests of information collected by the Council regarding all hospitals in the state. (*b*) Lists of all hospitals in the state as published in the latest directory. (*c*) A collection of selected literature bearing on hospitals and hospital efficiency. (*d*) A letter of instructions by which state committees would carry on the work in a uniform manner. (*e*) A tentative schedule of the essentials in a hospital for the satisfactory training of interns. (*f*) Forms on which additional data might be obtained by the committees as well as blanks on which reports of each committee's work could be prepared and returned to the Council.

Each committee was asked to consider the material sent and to inspect all hospitals as far as possible, or otherwise verify the information relating to each institution and to furnish the Council with an A-B-C rating for all institutions. In this survey, as reported a year ago, it was found there were approximately 6,000 hospitals having twenty-five or more beds, a total capacity of 250,000 beds.

The committees are still at work but reports have already been sent in for 1,298 hospitals of which 1,240 have been graded. Of these, 323 (26 per cent.) are in Class A; 448 (36 per cent.) are in Class B; 321 (26 per cent.) are in Class C, and 148 (12 per cent.) are below Class C. These ratings are being systematically recorded and the supporting data filed. Reports regarding certain disreputable hospitals have been obtained and these are barred from the lists published in the American Medical Directory.

The Association is informing itself thoroughly as to how well each hospital is meeting the needs of its community. At the same time it is giving the hospital the best possible assistance and information.

### ATTITUDE OF HOSPITALS

Hospitals, generally, are taking the common sense view, that the survey is a part of a large movement for hospital betterment. They see that hospital standardization is an inevitable process, and that they will soon be expected to measure up to certain standards of equipment, organization and practice. Many of them strive promptly to effect the improvements in organization and in service necessary to secure and retain a Class A rating.

### GROWTH OF HOSPITAL SERVICE

The character of our correspondence shows that the hospital information collected is rapidly turning to service. Requests are constantly coming from hospital staff members, superintendents, physicians, interns, nurses, and others for advice and information about hospital architecture, construction, management, staff organization, money raising campaigns, intern problems, nursing and the training of nurses, special hospitals, laboratory work, records, standards, social service, special courses, industrial medicine, etc. The indexing of information under appropriate titles has enabled us to promptly furnish the information requested.

A series of articles presenting hospital plans of special merit have been prepared in collaboration with several architects and are being printed in THE JOURNAL.

The "Schedule of Essentials in a Hospital for the Satisfactory Training of Interns" reported last year has been welcomed and several thousand copies have been distributed. In response to an insistent demand from persons responsible for the operation of hospitals, we are preparing a schedule of essentials for all hospitals which are to be given an acceptable rating whether they desire interns or not.

Another revision of the list of hospitals that furnish acceptable internships, will soon be ready for publication. Like the previous issues, it will be in tabulated form and will include a great deal of detailed and useful data relating to the hospitals, showing those that admit women interns and those that have training schools for nurses.

The rapid growth of hospital service indicates that the work should be continued along the following lines: (*a*) Push the collection of data regarding hospitals from all possible sources so that the clearing house for such information may become still more serviceable. (*b*) A further development of the Hospital Service Department in THE JOURNAL and the accumulation of a line of hospital literature. (*c*) Perpetuation of indexes and classifications already completed or begun. (*d*) Provision for inspection of hospitals where it is considered necessary, and where inspection by other agencies does not furnish satisfactory information. (*e*) Creation of a permanent hospital committee in each state and the retaining on it of competent and experienced men. (*f*) Continuation of the relationship with the individual hospital by which we may not only obtain information direct from the hospital but also that the hospital may receive the greatest benefit from such cooperation. (*g*) A friendly cooperation with other agencies working for the betterment of hospital service.

### AGENCIES INTERESTED IN HOSPITAL DEVELOPMENT

The American Medical Association, as the organization representing the medical profession of America, must necessarily continue its splendid clearing house of information on hospital matters the same as it supplies information on other topics in which physicians are interested. With its component state and county medical societies; with its complete biographical index of physicians and with its close relations with medical colleges and state licensing boards, the Association is admirably equipped to carry on efficient investigations with much less expense than is possible by other organizations. At the same time the Association welcomes the work done by other organizations and will lend its hearty cooperation toward the common end.

The American College of Surgeons during the last few years has conducted an investigation of hospitals. Their appeals to the attending staffs, boards of trustees and the public have stimulated an increased interest in hospital standardization. The Catholic Hospital Association also began an energetic campaign for the improvement of the hospitals in that denomination. The rapid growth in both the number and the size of hospitals shows that the field for investigation is not only extremely important from the public point of view but is also large and difficult. There is, therefore, room for all the work that can possibly be done to bring about a continuous and systematic supervision of these institutions which are of such vast importance to the public.

### THE AMERICAN CONFERENCE ON HOSPITAL SERVICE

At the annual conference of the Council on Medical Education in March, 1919, following an address by the president of the American Hospital Association, a resolution was adopted which led to the creation of the American Conference on Hospital Service. The first meeting was called by the President of the American Medical Association and held in the Association Building Monday, April 21, 1919. Delegates were present from the American Medical Association, the American Hospital Association, the American College of Surgeons, the Association of American Medical Colleges, the Catholic Hospital Association, the American Nurses' Association, the American Association of Hospital Social Workers, the Federation of State Medical Boards of the United States. A partial organization was effected under the name of the American Hospital Conference and, after the appointment of an executive council, another meeting was called to be held at Cincinnati in September in connection with the annual meeting of the American Hospital Association. At the September meeting the organization was completed, the name being changed to the American Conference on Hospital Service. A third meeting was called, to follow the

annual conference on medical education in Chicago, in March, 1920. Beside the associations represented at the first meeting in Chicago, the new association included in its membership the medical departments of the United States Army, Navy and Public Health Service. Permanent officers and a board of trustees were elected and it was decided to create several committees. The meeting in Chicago resulted in a further perfecting of the organization and the naming of the personnel of committees on hospital service and record, hospital internship, nursing and social service as related to industrial medicine. It is hoped that this organization will result in securing the cooperation of all who are interested in hospital development.

### GRADUATE MEDICAL EDUCATION

During the last year, the Chairman of the Council, assisted by Dr. Louis B. Wilson, of the Mayo Foundation, Chairman of the Council's special committee on graduate medical education, inspected all but a few of the graduate medical schools of the country and their report is briefly summarized as follows:

1. Opportunities for American medical graduates to study in Europe are at present largely limited to short "courses" of lectures and clinical and laboratory demonstrations. Positions permitting individual study of, and responsibility for, the diagnosis and treatment of patients are properly filled by each country's own medical graduates.

2. In the United States opportunity for graduate study is sought (a) by those desiring to study for a few weeks or months, and (b) those desiring to study for several years.

3. The short-term graduate students,—about 6,000 this year in the United States—are (a) general practitioners seeking courses in continuation of their undergraduate studies, and (b) partially prepared specialists seeking to perfect their technic, usually in some minor surgical field.

These two classes of graduates possess the following general characteristics:

Nearly all have practices, either general or more or less special, which they cannot leave for any considerable length of time; many are inadequately trained in the fundamental medical sciences; in the brief periods they can leave their practices, they are averse to spending much time on fundamentals, and, in most instances the time at their disposal is entirely inadequate to obtain even a proper start in the fundamental subjects. Most of them desire work in operative technic in surgery. A small proportion seek to study cases for clinical diagnosis. Most wish to be "crammed" and can afford to pay a reasonable fee for instruction.

The existing postgraduate schools take almost all applicants for short terms of study, though many do not enter because they cannot get the courses desired. University medical schools should provide opportunities for the better prepared men of these classes to combine diagnosis with treatment.

4. The long term graduate students,—about 4,000 in the United States this year,—are (a) those who wish to devote two or more years to study for practice in some special field, and (b) a small number who wish to prepare themselves for public health work or for teaching or research in the fundamental branches.

Opportunities for graduate students to prepare themselves by long periods of work in the clinical specialties are woefully lacking. Opportunities for long term courses in public health or in the fundamental branches exceed the demand, but fellowship stipends and ultimate financial rewards are too small to permit many without private resources to select such fields for their life work. The remedy is an adequate endowment for student fellowships and teaching positions.

On the basis of the inspection, the committee arrived at the following conclusions: (a) That the present facilities for graduate medical work in this country are entirely inadequate. (b) That the legitimate demand for work of this kind should be met. (c) That this demand, which has heretofore been made by proprietary schools should be met by the universities. (d) That it would be desirable for 15 or 20 strong university medical departments to consider the development of graduate medical departments. A suggested plan for such a school is as follows:

The graduate medical department should probably be independent of the under-graduate department, and with a separate faculty; an adequate teaching hospital and outpatient department; clinical laboratories for both out-patient department and hospital, and research laboratories. In addition to a general teaching hospital, it should have the control of special hospitals, such as eye, ear, nose and throat, orthopedic, infectious diseases, etc.

Provision should be made in the curriculum for at least five classes of students.

*Group 1.* For young men who have completed their medical course and their hospital internship, a course of probably three years, such as is given at the University of Minnesota. As far as possible these positions should be fellowships carrying with them a living salary. These students, at the satisfactory completion of their work, should be given a degree of Master of Science or Doctor of Philosophy in Surgery, Ophthalmology, or whatever specialty they have been studying.

*Group 2.* For men who have completed their medical course and internship and have been in practice for three to five years, a course of at least a year of special training which in addition to their practice would be the equivalent of the three year course of Group 1. These men, if they demonstrate their fitness, should be given the same degree as the men in Group 1.

*Group 3.* For men who have been in general or special practice a course of six months or more of training in some chosen special line. At the satisfactory completion of this work the student should be given a certificate.

*Group 4.* For a large group of practitioners short courses of from four or six weeks should be given in any field of work they desire. These courses should be known as practitioners' courses; they would furnish an opportunity for the practitioner to become more competent, but should not be regarded as preparing the practitioner for a specialty. No certificate of any kind should be given for this work.

*Group 5.* Certain courses should be planned also for practitioners who live near the medical school and could devote a few hours once or twice each week to some special subject without discontinuing their practice. This would enable practitioners to keep in touch with the newer developments in clinical and laboratory work.

As to compensation men who devote their entire time to teaching in the graduate school should be paid adequate salaries. The compensation of the clinical teachers could be met from tuition fees. In the Graduate Medical School of Harvard we were told that about 75 per cent. of the fee went to the teachers and 25 per cent. toward general expenses.

### III. Elevating the Standards of Medical Education

The third function of the Council was to act as the agent of the American Medical Association in its efforts to elevate the standards of medical education.

Towards this end, the Council, in 1905, established an annual conference on medical education. During the last few years the conference has been held concurrently with the annual meetings of the Association of American Medical Colleges and the Federation of State Medical Boards, and has grown into an annual congress on medical education and licensure. This congress has been entirely informal and is without legal powers. Nevertheless, as an open forum in which problems of medical education and licensure have been presented and discussed, it has been of great service in elevating educational standards. We hope that the newly organized American Conference on Hospital Service will also become closely identified with this annual congress.

The congress held March 1-3, this year, in Chicago, was a most successful and instructive meeting. Over 200 delegates were present, representing not only medical educators and representatives of state licensing boards, but also presidents of prominent universities, and representatives of educational boards and foundations. Beside the usual reports of progress in medical education and licensure, the papers dealt with

special functions of state universities, full-time teachers and research in medical schools; graduate medical education in the United States and abroad; problems and inter-state relations in licensure and a series of reports on medical teaching in the preclinical branches. Among the speakers were President George E. Vincent, of the Rockefeller Foundation; Abraham Flexner, of the General Education Board; President Thwing, of Western Reserve University; President Wilbur, of Leland Stanford University, and President Jessup, of the University of Iowa.

### URGENT NEEDS IN MEDICAL EDUCATION

There are three special needs which require the attention of those interested in the best medical education:

1. The age of students on graduation.
2. The financial side of medical education.
3. The development and reorganization of medical schools on sound educational lines.

### THE AGE OF STUDENTS ON GRADUATION

At the annual conference held by the Council in 1917, it was shown that the average age of students on graduation and completion of the hospital year was 28 years plus. This brings the student into the practice of his profession at a far too advanced age. In Central Europe and in Great Britain, physicians enter practice at about 25 or 26 years of age. The solution seems to be to save two years of the student's time by a reorganization of the intermediate and high school curriculums. A comparison of the educational scheme in the United States with that of European countries shows that about two years of time are lost by the average student in this country during his grammar and high school courses. The student of the United States on graduation from high school, would at the same age in Europe have completed the equivalent of two years of work in our colleges of arts and sciences. Agencies in the United States having to do with high school and college education are planning to reorganize the secondary school curriculums so as to save these two years of time. This would enable the average student to graduate two years earlier from the medical school.

### THE FINANCIAL SIDE OF MEDICAL EDUCATION

Many plans now under consideration for the development of medical education seem to utterly disregard the cost.

The fees of each medical student on the average are about $150 each year, while the cost of his instruction is about $450. In many institutions the cost is $1,000 or more and is still mounting. With the increasing cost, fees could be raised to possibly $250. In the interests of the whole community the cost of medical education should be kept as low as possible. For example, the cost of maintaining a hospital for medical teaching should not be borne by the medical school. No hospital should be created and maintained primarily for the teaching of medicine. The first function of a hospital is to take proper medical care of patients, and as a second function, medical teaching and research.

The use of great municipal, state and denominational hospitals should be placed at the disposal of our medical schools for teaching and research. With proper control such a combination of hospital and medical school can be of great mutual benefit. For example, the state hospitals in several states have also been made the teaching hospitals of the state university medical schools. It is pleasing to note also that in several cities—e. g., Augusta, Memphis and Louisville—city hospitals have by contract been made the teaching hospitals of local medical schools. Such combinations are in the interests of the public and receive enthusiastic and generous support. Out-patient departments likewise would serve a more useful function in the community if they were utilized for medical teaching. Special hospitals, such as maternity, orthopedic, children's, eye and ear, psychopathic, etc., should also be associated with medical teaching.

### THE ALL-TIME CLINICAL FACULTY

The much discussed plan of all-time clinical teachers is so extravagant that it cannot be generally adopted by the medical schools of the country. A school without unlimited resources could not consider it and even a school with large resources can secure better results with a given amount of money by adopting the part-time plan. The all-time clinical teacher experiment has not been encouraging and it is difficult to secure the best type of men for these positions under restrictions that exclude them from the rewards of professional work well done. It is no secret that these all-time clinical positions have gone begging and well trained clinicians have refused to accept them.

For medical schools having a reasonable endowment, the most practical plan of organizing the clinical departments would be to provide the head professor in each department with a salary of about five thousand dollars a year, and with 10 or 20 beds in the hospital which he can use for his private patients. He should be permitted to devote two hours a day to this private work and be expected to devote the necessary time to teaching duties. If a professor in a clinical chair abused his privileges it would be easy to correct or eliminate him. Living salaries also should be paid to associates; younger men who would do the bulk of the teaching and clinical research. Their greater compensation is the educational opportunity by which after a few years they can become masters of the science and art of medicine and be able to enter successfully into the practice of their specialties. This plan is not an experiment but has been gradually developed after years of experience in the medical departments of the best universities of the world.

### REORGANIZATION OF MEDICAL EDUCATION

Some weaknesses have developed in the process of changing our old type of medical schools into medical departments of universities. In the transition the laboratory branches of the medical course have been placed in the hands of university professors who are not in close touch with the practice of medicine and the medical profession. As a consequence,—and as shown by the testing of medical education in the war,—the laboratory branches are not being well taught, even in our best schools, from the standpoint of the training of practitioners of medicine. The college professors of anatomy and physiology have many of them drifted from the science and practice of medicine and from the medical profession.

The American Association of Anatomists, composed largely of the teachers of anatomy in medical schools, is no longer affiliated with medicine. Its meetings are largely devoted to scientific discussions of the embryology of the rat and lower forms of life and have little or no relation to the science and art of medicine. In many medical schools splendid courses in embryology and comparative anatomy are given but applied human anatomy which is an every day necessity to the practitioner of medicine, is not taught. The college professor of anatomy is sometimes incompetent to teach it and as a result the students suffer. Men of the non-medical type have no place as teachers of anatomy in a medical school and their places should be filled by men who have had a complete medical training. Their first duty is to train practitioners of medicine.

### SOME WRONG TENDENCIES IN CLINICAL TEACHING

Medicine passes through cycles. In Trousseau's time, in 1860-1870, the chemists thought chemistry would solve all medical problems, and Trousseau in a clinical lecture pointed out the fallacies of their claims. The same place in the cycle has returned and the chemists and laboratory workers are again claiming that all medical problems are to be solved by the chemical route. To many of these men, the older methods of physical examination, careful clinical observation and morbid anatomy, are old and worn out things in the light of the newer medical chemistry. And some of these men have succeeded in so impressing university trustees, that men who have had special training only along chemical lines are being appointed to chairs of medicine rather than men with a broad clinical training. This tendency is not in the best interests of medical education, of the medical profession, or of the patient.

Sir James Mackenzie in his recently published book on the future of medicine has done a real service in calling attention to the great importance of clinical research along the broad

lines of the clinical observation of the patient and the attempt to properly interpret from the symptoms and history the pathology in the case.

### SOME TENDENCIES IN OUR MEDICAL SCHOOLS

At present in this country the university professors in the laboratory branches have been given too large a part in reorganizing our university medical schools and in developing the medical curriculum. It is clearly our duty to call attention to this fact and see that this tendency is corrected. The first and highest duty of the medical school is to train competent practitioners of medicine and this cannot be done by the college professor of embryology and comparative anatomy, or by the chemist working in a clinical laboratory or by the research worker in some isolated medical institute. This problem is to be met by placing the reorganization of medical education in the hands of medical men.

1. The teachers of the laboratory branches should be required to have a medical training which would give them a medical point of view; they would keep in touch with the art and science of medicine, and would realize that their first duty was to assist in training practitioners of medicine.

2. The teachers of the clinical branches should have a broad medical training in both the science and the art of medicine; they should be great clinicians in their special fields, who understand not only what anatomy and physiology, pathology and pharmacology the student needs to acquire, but also what he needs to know to become an expert practitioner of medicine. Fortunately in the last twenty years many such men have been trained in this country.

The controlling element of a medical faculty must consist of a group of medical men in the closest touch with the science and art of medicine and with the medical profession. Such a group must have as its members the professors of medicine, surgery, obstetrics and pathology. Such a group must control a teaching hospital and an out-patient department, with adequate clinical and pathologic material and well equipped laboratories. This plant should be located where it can secure ample clinical material with little or no cost to the medical school.

There is no desire to belittle the importance of the laboratory branches in medicine. But a medical school is a school in which to train doctors and not anatomists or physiologists. If it fulfills its first and most important function, the training of practitioners of medicine, it will also be training teachers and research workers.

### SUMMARY

This report is summarized as follows:

(a) Instead of 162 medical colleges which existed in 1904—over half the world's supply—this country now has 86, the character of which has been greatly improved. Instead of only 3 per cent. in 1904 requiring two or more years of college work for admission now 92 per cent. have that standard.

(b) The lowest ebb in the enrolment of medical students, due to the adoption of higher entrance qualifications, was 13,052 students in 1918-19. An estimate shows that the enrolment in the present session is 13,554 students. The increased enrolments of premedical students show that the classes in medical schools will continue to increase at least during the next several years.

(c) The trend of medical schools to limit their enrolments of medical students is in the interests of better medical education. Even with this limitation, the capacity of Class A medical schools is sufficient to care for many more than are at present enrolled in medical schools and this capacity can be easily expanded to meet future needs.

(d) With the higher standards adopted during the last sixteen years the requirements for admission to medical schools in the United States are now on a par with other leading countries.

(e) The American scheme of premedical education is of particular advantage in that a student can postpone his final selection of the medical profession until he is best qualified to make that choice.

(f) Hospital internships are voluntarily obtained by a great majority of medical graduates. An internship has been made an essential qualification for the license in ten states. It has been adopted as an essential for the degree by eleven medical schools.

(g) The present demand for hospital internships could not be met even if the number of medical schools and the number of graduates each year should be doubled or trebled—a measure not necessary to meet the normal demand for physicians.

(h) The hospital intern problem may be solved by (a) extending the internship to two years; (b) employing resident physicians; (c) training assistants or nurses to do much of the work now devolving on interns; (d) having stenographers take down histories from dictation at the time staff members examine patients.

(i) There is no scarcity of physicians in the United States; there is, however, an imperfect distribution of the present supply. Medical care in rural communities is improving rapidly with better roads, automobiles, etc., by which services of physicians in nearby cities may be more readily secured.

(j) A re-inspection of all medical colleges is being made by the Council preparatory to a revision of the classification of medical schools. This re-survey is also revealing many improvements as compared with conditions found in 1906.

### IMPROVING HOSPITAL SERVICE

(k) The improving of hospital service is now one of the most important works confronting the medical profession. It is a work in which, naturally, physicians are most largely concerned. The American Medical Association, therefore, should take an active part in this work.

(l) The work of the Association in connection with hospitals has rapidly grown since 1903. Under the Council on Medical Education there is now a Bureau on Hospitals with a man who devotes his entire time to the work. With the rapidly increased interest in hospital development during the last few years the work has been correspondingly extended.

(m) Besides the collecting of hospital information each biennium for the American medical directory, more elaborate surveys of all hospitals were made in 1912-14, and in 1915-16. A third extensive survey is now in progress.

(n) An advisory committee on hospitals to cooperate with the Council has been appointed by every state medical association. These committees are doing splendid work and several have undertaken the personal inspection of all hospitals in their states.

(o) The Association should continue to (a) conduct a clearing house of hospital information; (b) further develop the Hospital Service Department in THE JOURNAL; (c) perpetuate its indexes and classifications; (d) inspect hospitals where satisfactory information is not otherwise obtained; (e) create permanent hospital committees in all states; (f) develop closer relationship with individual hospitals; (g) cooperate with other agencies working for better hospital service.

(p) An organization known as the American Conference on Hospital Service has been created at the suggestion of the Council on Medical Education in which the various agencies interested in hospitals are represented. The first meeting was held at the American Medical Association headquarters, Chicago, April 21, 1919. Subsequent meetings for the completion of organization were held in Cincinnati, September 9-10, 1919, and again in Chicago, March 3-4, 1920.

### NEEDED IMPROVEMENTS IN MEDICAL EDUCATION

(q) There is great need in this country of increased and improved facilities for graduate medical education. This need could be best supplied by our leading university medical departments.

(r) Efforts should be continued to so rearrange educational methods that the average age of medical graduates may be reduced by at least two years. The solution now seems to be in a reorganization of intermediate and high school education.

(s) The extravagant and unnecessary expenditure of money in the development of medical education should be deprecated. In some recent plans for development this point seems to have been utterly disregarded.

(t) There is a serious tendency in present day medical education to drift into the ultra-scientific and to ignore or belittle the development of a closer relationship of the pre-clinical and clinical branches. This tendency will be decreased if it is required that teachers of the laboratory departments in medical schools shall have had a complete medical training by which they will obtain the medical point of view.

Respectfully submitted,

COUNCIL ON MEDICAL EDUCATION.
ARTHUR DEAN BEVAN, Chairman,
ROBERT C. COFFEY,
WILLIAM D. HAGGARD,
ISADORE DYER,
WILLIAM PEPPER,
N. P. COLWELL, Secretary.

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### Report of the Council on Scientific Assembly

Dr. J. S. Horsley, Virginia, Chairman, presented the report of the Council on Scientific Assembly, which was referred to the Reference Committee on Sections and Section Work.

The report follows:

*To the Members of the House of Delegates of the American Medical Association:*

Shortly before the adjournment of the final meeting of the House of Delegates at Atlantic City, the following preamble and resolution were submitted by the delegate from the Section on Obstetrics, Gynecology and Abdominal Surgery:

WHEREAS: An effort is being made to organize an international Congress of Obstetricians and Gynecologists at a meeting in Brussels during September next, at which American Obstetricians and Gynecologists will have representation, therefore, be it

*Resolved*, That the Section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association unanimously approves of this movement, stands ready to cooperate in every way, and cordially invites the Congress to hold its initial meeting in New York at a convenient date to be determined.

The House received and referred this communication to the Council on Scientific Assembly but it did not empower the Council to act in this particular matter which does not fall within the scope of the Council as it is defined in the By-Laws of the Association. Consequently, the Council respectfully reports that it has taken no action.

On January 10, the Council held a conference with the secretaries of the sections at the headquarters of the Association. All the sections were represented either by their secretaries or one of the other executive officers. All the members of the Council were present except Dr. Roger S. Morris, who was absent on account of serious illness. In compliance with the Standing Rules of the House of Delegates for the guidance of the Council on Scientific Assembly, and with unanimous consent of all in attendance at the conference, arrangements were made so that each section will hold one meeting on each of the days assigned for section meetings during the 1920 annual session. Seven sections will convene each morning at 9 o'clock as follows: Surgery, General and Abdominal; Ophthalmology; Diseases of Children; Pharmacology and Therapeutics; Nervous and Mental Diseases; Preventive Medicine and Public Health, and Urology. Eight sections will convene each afternoon at 2 o'clock as follows: Practice of Medicine; Obstetrics, Gynecology and Abdominal Surgery; Laryngology, Otology and Rhinology; Pathology and Physiology; Stomatology; Dermatology; Orthopedic Surgery, and Gastro-Enterology and Proctology. It will be noted that most of the sections which at the 1919 annual session met during the morning hours, this year will hold their meetings in the afternoon hours, and that the majority of the sections which met last year in the afternoon hours will meet this year in the mornings.

The Council appreciates the interest and hearty cooperation manifested by the section officers who attended this conference. In the opinion of the Council this has made it possible to provide a well balanced scientific program for the entire Scientific Assembly—a program which will be interesting and instructive to all the Fellows who attend the annual session and yet one which maintains or improves the scientific standards of the sections.

In the development of its work, the Council has come to the point where it feels that its effectiveness would be increased if it were constituted in a somewhat different manner than that now defined in the By-Laws. Consequently, the Council asks that it shall be reorganized so that it shall consist of five appointed members and shall have associated with it, ex-officio, the President-Elect of the Scientific Assembly, the Editor of THE JOURNAL and the Secretary of the Association. The members of the Council desire also to emphasize the value to the Council of the experience which members have gained from serving as section officers. The Council recommends that Section 7, Chapter VII of the By-Laws shall be amended so as to provide for the changes in the composition of the Council which have been suggested and to define the functions of the Council as follows:

The function of the Council on Scientific Assembly shall be: (1) To secure cooperation between the sections. (2) To pass upon questions of policy in relation to section work. (3) To stimulate the development of the sections. (4) To consider at first hand applications for new sections, or for changes in existing sections, and to report to the House of Delegates. (5) To assign and to appoint officers for the meetings of the section on miscellaneous topics. (6) To arrange the programs for the general meetings of the Scientific Assembly.

At the last annual session of the House of Delegates, the Section on Dermatology requested that the title of that section be changed to the "Section on Dermatology and Syphilology." As this is a question of policy in relation to section work, and also is a change in the existing sections, the matter has been brought to the attention of the Council, and after giving the subject careful consideration, the Council recommends that the request of the Section on Dermatology be complied with, and that Section 1, Chapter IX of the By-Laws be amended by substituting for the present Item 11 in that section reading "Dermatology" the words "Dermatology and Syphilology."

In compliance with the suggestions offered at the conference of secretaries of sections, in order to make the statement more definite, the Council recommends that Section 11, Chapter XI of the By-Laws shall be amended by substituting for the present wording of the section the following:

SEC. 11.—LENGTH OF PAPERS AND DISCUSSIONS.—The time allowed for the presentation of a paper before a section shall be limited to fifteen minutes. No one shall discuss any paper more than once, nor for longer than five minutes except with the unanimous consent of those present.

In order to clarify the meaning of Section 5, Chapter XI, it is recommended that the section be amended by adding at the end of the second sentence the words "of the section," so that the section shall read:

SEC. 5.—EXECUTIVE COMMITTEE.—Each section shall have an executive committee, which shall consist of the last three retiring chairmen. In case of absence of a member of the executive committee from a Scientific Assembly, the vacancy shall be filled by the chairman of the section. This committee (as constituted at the close of the Scientific Assembly) shall examine and pass on all papers read before the section, and shall endorse for publication only those that are of scientific or of practical value, and which will reflect credit on the section before which they were read.

Respectfully submitted,

J. SHELTON HORSLEY, Chairman,
E. S. JUDD,
F. P. GENGENBACH,
ALEXANDER R. CRAIG.

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### Report of Committee on Red Cross Medical Work

Dr. C. W. Richardson, Chairman, presented the report of the Committee on Red Cross Medical Work, which was referred to the Reference Committee on Reports of Officers.

The report follows:

*To the Members of the House of Delegates of the American Medical Association:*

The Committee on Red Cross Medical Work wishes to report that having put itself in relationship with the American Red Cross, it found that the American Red Cross decided it was useless to call a meeting of the committee, or to put it into action this year on account of the cessation of the war, and that no further need of general action between the Red Cross and the American Medical Association existed. The committee requests therefore, that it be discharged.

Respectfully submitted,

CHARLES W. RICHARDSON, Chairman,
CHARLES R. REYNOLDS,
JOEL T. BOONE.

## ADDENDUM

*(Insert page 1232, Preceding Reports of Officers)*

Dr. J. Voncken of Belgium was introduced and through the Speaker thanked the delegates for his warm reception and expressed his pleasure at being present.

The Vice-Speaker, Dr. Dwight H. Murray, New York, took the Chair, after which the Speaker delivered an address, which was referred to the Reference Committee on Reports of Officers.

### Address of the Speaker, Dr. Hubert Work

*To the House of Delegates:*

Again it is my pleasure to convene this body of selectmen, from the membership of the American Medical Association.

By common consent, reduced to Constitution and By-Laws, this House of Delegates is the governing branch of the Association—the machinery which correlates the scientific product of the annual meetings. You work under articles of government which you amend or abrogate at will. No coordinate branch of the Association may direct or compel, beyond your pleasure. All of its officers are elected and their duties defined by you.

This recapitulation is intended to recall to mind your prerogatives and responsibilities in the art of government.

#### Constitutional Changes

The Judicial Council in its report now in your hands, has made recommendations for changes in the Constitution and By-Laws, for your consideration and action. In the main the changes consist of reconstruction of the text for the purpose of clarity, with the deletion of all matter relating to the Committee on Red Cross Medical Work, also of the text referring to the Ad Interim Committee, with minor changes.

#### The Ad Interim Committee

The purpose of the Ad Interim Committee, designed to act for the House of Delegates in emergency, was well conceived.

Its predetermined personnel was probably unfortunate. Authority for quick action should be vested in a small, wieldy body of Fellows for emergency service. If this committee be continued, it should, I believe, consist of the Speaker, the Secretary, and three sitting members of the House, to be elected annually. As now constituted the Ad Interim Committee includes the President of the Board of Trustees and imposes interlocking duties on him. Ex-presidents of the Scientific Assembly may lapse their interest in the Association. Certainly their official responsibilities have passed.

The President and President-Elect are not subject to the House of Delegates, so that four of the seven members of this committee as now constituted to act for the House, are not responsive to it, while the dual allegiance of the President of the Board of Trustees embarrasses him.

A substitute for the existing Ad Interim Committee may be provided by delegating its prescribed emergency duties to the Board of Trustees, or to the Executive Committee of the board, as you may determine. Argument that this might concentrate power would be valid. However, it would pass to officers whose acts are subject to review by the House.

The new By-Laws propose that the Speaker shall nominate members of the Standing Committees, presumably because of his more intimate knowledge of the qualifications of Fellows and of the duties of these councils, which come directly under the jurisdiction of the House. Heretofore members of these committees have been nominated by the president of the Scientific Assembly, whose term of office ends one year thereafter and four years before that of his appointees.

A suggestion well worth considering but not recited in the proposed amendments, is that of reducing the number of Trustees of the Association to seven or five members; the subdivision of the United States into trustee districts, and the lengthening of their term of office, perhaps coupled with a prohibition against reelection, at least until after one year has intervened.

This suggestion implies a substantial reduction in the operating expenses of the board and need not endanger its working efficiency.

To limit the number of board members, implies concentration of authority, but at the same time, to fix a limit to their continuous service, would preclude the very remote possibility of self-perpetuation and would bring to the board, each year, a new member directly from the profession without.

The further suggestion for a districting of the United States, if approved, would avoid the election of two or more Trustees from a circumscribed, undefined section, and would result in as wide geographic representation on the Board of Trustees as we now have.

The relations of this House to the Assembly of the Scientific sections become more clearly defined each year. Inasmuch as the House is the executive of the Scientific Assembly, including the election of its officers, it would appear that all section units of the Scientific Assembly should indicate by nomination to the House, those whom they would approve for the presidency and vice presidency of the Scientific Assembly. This plan, if adopted, would afford each section an opportunity to compliment members who had distinguished themselves, and at the same time put before the House many potential presidents, for consideration, both for immediate and subsequent elections.

#### Department of Public Health

Our Association should again address itself to procuring a separate governmental department of public health. The public mind has been prepared for it by the exigencies of the late war. Health service is not logically a part of the national treasurer's duties, nor the Surgeon-General properly subordinated to the Adjutant-General of the Army. This is not a new subject to you but an old ambition which can now be revived with more than reasonable assurance, but preferably from different angles of approach. A concurrent resolution preliminary to such action, recently made favorable progress in Congress, but as heretofore, has failed because of the limitations of individual sponsors.

Those favorable to government supervision of the public health, through a separate department created for that purpose, now hold, or are aspiring to high office. It is possible that the influence of our 80,000 members exerted on our Congressmen at home, with powerful influence reaching from above them in Washington, may become effective.

#### The Art of Medicine

At one time physicians were said to practice the art and science of medicine. The art of medicine is the applying of its science; the selling of the science of medicine, if you please. It comprehends the refinement of the little things in practice and dictates the treatment of the patient. Homeopathists cast the future of their practice on it and popularized their dogma. The Christian scientists, likewise all quacks, thrive through attention to an art once attached, but now largely lost, to internal medicine, but which has been developed by surgeons, independently.

Masters of great clinics are famed for their art in organization and the results attained, partly through the consciousness of the patient. The present status of sanitation and of preventive medicine as a whole falls within the Art of Medicine primarily, and its world-wide acceptance supports the argument.

This is not a plea for less Science in medicine, but for more Art; for a development of the latter, pari passu with the former; for the symmetrical development of ethical medicine; for its protection against the cults which practice the Arts of Medicine without its Science; from the charge that it is becoming a trade-science, neglectful of the psychic sensibilities, the observance of which distinguishes our profession from veterinary medicine.

Doubtless the greatest immediate menace to public confidence in ethical medicine is pending through isolated, operative surgery in unscrupulous hands. Unless the Art of Surgery can be re-associated with the Science of Medicine and their interdependence again established, the morale of surgeons will necessarily suffer, since the quickest diagnosis can be made by exposing the suspected organ. But the rights of the patient may have been violated. This is a real danger and not a groundless alarm. The remedy for it logically lies in the hands of the American College of Surgeons, together with others who are surgeons first and operators afterward.

### Military Training

The vexed question of Compulsory Military Training has been confused by Members of Congress and personal campaigners until the public apparently believes that Universal Military Training would invite war, but without it, the country would be safe.

Congressmen, alarmed by our mounting cost of government; ex-service men who resented the draft; timid women lacking the spirit of the great American mother; pacifists and conscientious objectors unite in protest against it.

If the public could realize that 35 per cent. of our young men of draft age were disqualified for military service in the World War because of physical defects, and logically also for effective citizenship, the opportunity afforded in training for correcting these defects, the leveling influence of contact between young men from every social station. Furthermore, that physical correction, mental development and vocational training are the objects sought and that instruction in the Manual of Arms is the least concern of those who favor this free summer school for boys; perhaps the narrowed vision of these thoughtless ojectors would expand. This duty also appears to fall within the province of physicians, patiently to lead the public toward that which is best for it.

### In Memoriam

Since we last met three of our members have answered their last roll call.

Floyd M. Crandall; of keen intellect, industrious, of pleasing personality and absolute loyalty to the highest ideals in medicine, died as he had lived, serene and unafraid. He was the supervising architect of our Association's laws. All changes for many years were reviewed by him. Our code of professional morals is couched in his language, and will live afterward. Those who knew him best admired him most. Nothing was too troublesome for him to do for a friend or for his profession. Reward was to him an incident and expressed appreciation an embarrassment. We can go forward without him but not so far, nor so safely.

E. C. Cantrell, for many years a trustee with floor privileges, followed by active service as a delegate in this House, fell in service to his profession. He heard the call of his country intended for younger men. He answered it and rendered distinguished service as an officer. When his uniform was mended and folded and put away, he heard another call for help. The sea-wall of his state had failed and people perished. It was his summons from beyond the Great Divide, and he, too, stepped out into the night, searching for the lost trail. Worn by volunteer service to his country and exhausted by voluntary service far outside of his community responsibilities, he did not die; he was overwhelmed.

Clinton P. Meriwether, with partially restored health, found his greatest usefulness in the later years of his life; to this Association, to his profession and to his country at war. He fought the battle of life with his nemesis beside him. It walked with him, sat down with him to dine, slept with him and eventually slew him. But never, did his great courage fail nor his step falter. And when the shadow of his life was merged into the darker shadow of the Valley, "with a cheery smile and a wave of the hand he wandered into an unknown land."

Three upright, tried and true physicians. We are proud that we knew them, and comforted by the belief that the light everlasting is falling on the upturned faces of these men.

### Reference Committees

The Speaker resumed the Chair and announced the following Reference Committees:

**SECTIONS AND SECTION WORK**

| | |
|---|---|
| Hugh T. Patrick, Chairman | Illinois |
| Lee Masten Francis | New York |
| Frank E. McCullough | U. S. Navy |
| S. R. Roberts | Georgia |
| Southgate Leigh | Virginia |

**RULES AND ORDER OF BUSINESS**

| | |
|---|---|
| W. R. Bathurst | Arkansas |
| John S. Helms | Florida |
| W. S. Lindsay | Kansas |
| E. A. Pray | North Dakota |
| Leroy Long, Chairman | Oklahoma |

**MEDICAL EDUCATION**

| | |
|---|---|
| J. H. Hall, Chairman | Colorado |
| W. H. Seeman | Louisiana |
| Frederic E. Sondern | New York |
| L. Heldren | Illinois |
| F. F. Russell | U. S. Army |

**LEGISLATION AND PUBLIC RELATIONS**

| | |
|---|---|
| Franklin E. Murphy | Missouri |
| J. E. Lane | Connecticut |
| S. E. Lambert | Washington |
| J. H. J. Upham, Chairman | Ohio |
| Le Roy Crummer | Nebraska |

**HYGIENE AND PUBLIC HEALTH**

| | |
|---|---|
| J. W. Scherescheswky, Chairman | U. S. P. H. S. |
| A. T. McCormack | Kentucky |
| C. Van Zwalenburg | California |
| J. W. Flinn | Arizona |
| C. St. Clair Drake | Illinois |

**AMENDMENTS TO CONSTITUTION AND BY-LAWS**

| | |
|---|---|
| W. B. Russ | Texas |
| E. A. Hines | South Carolina |
| Albert E. Bulson, Jr. | Indiana |
| Edward Heckel | Pennsylvania |
| Rock Sleyster, Chairman | Wisconsin |

**REPORT OF OFFICERS**

| | |
|---|---|
| Thos. S. Cullen, Chairman | Maryland |
| F. B. Lund | Massachusetts |
| Homan Taylor | Texas |
| B. R. McClellan | Ohio |
| C. R. Odgen | West Virginia |

**CREDENTIALS**

| | |
|---|---|
| S. W. Welch | Alabama |
| Jos. M. Akin | Nebraska |
| J. B. Gibby, Chairman | Pennsylvania |
| John C. Rockafellow | Iowa |
| D. E. Sullivan | New Hampshire |

**MISCELLANEOUS BUSINESS**

| | |
|---|---|
| C. J. Whalen | Illinois |
| T. H. Halsted | New York |
| Geo. E. Reading | New Jersey |
| J. W. Bell | Minnesota |
| F. C. Warnshuis | Michigan |
| C. E. Humiston, Chairman | Illinois |

Dr. John D. McLean, Pennsylvania, rose to a point of order. He stated that the Speaker had authority to nominate members for Reference Committees, but they were to be elected by the House.

The Speaker stated that he had authority to appoint the Reference Committee, and the Committees so appointed, and announced would stand unless the House decided otherwise.

Dr. A. T. McCormack, Kentucky, moved that the members of the various Reference Committees as nominated by the Speaker be elected.

Seconded and carried.

The next in order was an address by Admiral William C. Braisted, U. S. Navy, President-Elect of the Association.

The Speaker stated that Admiral Braisted had requested the privilege of addressing the House after his induction into office, which request was granted.

### Report of Secretary

The Secretary presented his report, which was referred to the Reference Committee on Reports of Officers. (See page 1232.)

### Address of Dr. Alexander Lambert

The President of the Association, Dr. Alexander Lambert, New York City, delivered an address which was referred to the Reference Committee on Reports of Officers:

For a number of years there has been slowly developing a realization of the influence and value of hospitals as institutions. It is also evident that the rapidity of the growth of these institutions and the amount of benefit to be derived from them depends on the development of many different interests which are focused in each hospital, making it an institution and not merely a shelter in which the sick may rest and recover.

As a modern development nursing came first and then the beginnings of modern surgery followed by the practical application of preventive medicine causing the separation of communicable diseases from the general wards. Then followed the development of the social service side of the institution through which the great human relationship of the sick and injured was not lost sight of when they entered the hospital. Through which also the care and treatment of the sick and injured did not cease when they left the hospital, but continued with therapeutic intent out into their daily environment. It soon developed in the minds of the surgical side of the profession, as the great possibilities of modern surgery were unfolded, that the best surgical technic could not be brought to perfection without a tremendous development in the hospital as an institution in which all the multiple details of the best surgical technic could be obtained. To bring this about required a standardization and development of hospital organization itself. The development of all medicine under the expanding influence of scientific research forced, as necessities, into the hospitals, several kinds of laboratories such as roentgen ray, chemical and pathological.

Simultaneously with this technical growth within the hospital, medical education has developed and coincidentally it became increasingly evident that the future development of the medical school and the hospital were inseparably linked together. It was further noticeable that on the one hand the most painstaking care of the sick and injured was carried out in the hospitals connected with the medical schools and on the other hand the medical schools needed the biggest hospital opportunities. The executive side of the management of the hospital, of course, endeavored to keep pace with the development in the technical or medical side, and it was soon evident that it required a combination of medical and executive ability to run to the best advantages a large hospital, and required the vigorous energy of able-minded trustees to manage the institution as a whole and keep it in existence as an endowed or a self-supporting institution.

The activities of all these various interests centered in the hospital could not proceed without the various societies back of the individuals engaged being equally interested in a subject of such importance. About a year ago, at the call of the President of the American Medical Association, a meeting was held at which it was decided to hold a conference of the societies interested in hospitals, and representatives from the following societies were invited to meet together in September, in Cincinnati:

American Association of Industrial Physicians and Surgeons.
American Association of Hospital Social Service Workers.
American College of Surgeons.
American Hospital Association.
American Medical Association.
American Nurses' Association.
Association of American Medical Colleges.
Catholic Hospital Association of the United States.
Federation of State Medical Boards of the United Sates.
International Compensation Board.
National League of Nursing Education.
National Organization for Public Health Nursing.
The Medical Departments of the Army and Navy and the U. S. Public Health Service.

At the Cincinnati meeting a permanent conference was organized to meet regularly as a forum for the discussion and development of the common interests. The separate societies here represented have in the past through misunderstanding and through lack of knowledge of one another's aims, failed to coordinate and have instead often produced discord and brought about results injurious to the best development of the hospital as an institution. It is only through the continuous mutual education of the various groups that the necessary knowledge of what a hospital should be in a community can be developed in the minds of those most interested in hospital work. No individual group of the hospital conference is at present capable of developing the hospitals of this country as they should be developed.

The subject is of such great and constantly increasing importance to the medical profession that it is time the American Medical Association should take cognizance by special action of a subject of such vital interest to its members and should lend its support and influence through definite and continued action. Such action in the American Medical Association can only be brought about through the existence of a standing committee, formed as are the other councils of the American Medical Association.

In the first place the question arises whether or not a new council should be formed or a bureau developed under some existing council. Of the existing councils, the Judicial Council does not come under consideration. Questions of hospital management and development should not be placed among its duties. There is already existing a Bureau of Hospitals under the Council on Medical Education, a report on which is in the handbook at present before you. The activities of this bureau are built around the interests of medical education and the instruction of interns, and its information largely gathered from interns in the hospitals and from those interested in hospitals in the relation to the intern. This bureau has collected and possesses a tremendous amount of information not yet tabulated and at present, therefore, useless, which is not directly of interest in the relation of medical education or the internships, but as soon as tabulated it will be of enormous value to the profession for their information regarding the general situation in hospitals.

Hospitals having interns comprise probably 20 per cent. of all the hospitals in the country. Eighty per cent. of the smaller hospitals scattered through the country will, in all probability, never be able to obtain interns and yet in the mass these must be depended on to give the greatest amount of care to the sick and injured of the country.

One realizes as one reads this report of the Council on Medical Education that the entire hospital situation has been considered solely on the narrow line of rendering hospitals centers for postgraduate training of prospective doctors and the larger aspect of the hospital problem of having the hospitals serve their communities as vital centers in the protection of the population as well as places in which the sick may be cared for is completely ignored.

In reading the report the impression might be gained that the American Medical Association intended to attempt to dominate the entire hospital situation, and domination at the present time is not what is desirable when cooperation is essential to success.

The plan as outlined corresponds exactly to what has been done in regard to medical schools and has worked well in solving this problem, but the hospital question is more extended than that of medical schools, and any attempt to classify hospitals along the single line of whether they possess interns or not does not meet the exigencies of the problem at all, but would be sure to create an antagonism, whether just or not. The Bureau of Hospitals, therefore, should not be under the Council of Medical Education and cannot so be without great injury to the smaller hospitals and without causing incessant antagonism and injury to the medical profession throughout the entire United States. Should it be, however, under the Council on Health and Public Instruction? It is possible for this House of Delegates so to transfer it if in their wisdom they see fit. A committee on hospitals can be formed by the Council on Health and Public Instruction without further action or change in the By-Laws, since

this Council has power to form committees, and it is so stated in the By-Laws.

Can you obtain the best men in the profession to work as a subordinate committee in a bureau under another committee? For such must be the line of communication to the House of Delegates for any definite plans that any bureau on hospitals may care to submit, provided that there are no differences of opinion regarding the carrying out of these plans. The hospital situation in the country is of such great importance that the responsibility for it and for the action of the American Medical Association concerning it must, it would seem, be taken by the House of Delegates itself and the group of men acting for it must have direct and unobstructed access to it at all times to obtain the sanction of the House for its plans for the development of a subject so large and important, reporting of course, as all the councils do, to the Board of Trustees between the meetings of the House of Delegates. It seems, therefore, that the customary action of the House of Delegates should be followed in dealing with a subject that is of great importance and which is bound to grow in this importance and to continue for a long period of time, that is, to form a standing committee to care for the interest of the Association in the matter and to work in cooperation and harmony with all other interests and other societies acting in the same field. It would seem to be wise, therefore, that a new council, and not a bureau under one of the present councils, should be formed to take charge of this subject.

Among the other reasons given in the discussion which has developed up to this time, it is said that there are already too many councils, and also that the American Medical Association could not afford it. In the first place that there are too many councils already, or that to add a new council will make too many, is equivalent to saying that the American Medical Association must take up no further interests; it must be satisfied to be limited in its public interest to preventive medicine and to medical education and that in the further growth of the nation and in the growth of the social conscience of the community for the care of its sick or in other future development or interests of the medical profession, the American Medical Association shall take no further part. Such a view, gentlemen, comes only when men look back at the end of successful careers and cease to look forward. It is not the thought of the vigorous years of life. That the American Medical Association cannot afford to bring into existence a new council on hospitals, but can continue a bureau on hospitals is hardly consistent logic, because the main expense of such a Council is practically connected with the carrying on of an efficient bureau and expanding the efficiency and developing the knowledge already obtained in the present bureau—in short, developing broadly what has already been so well begun.

There is no question that the American Medical Association cannot afford at present to spend great sums in any new direction; neither are great sums here required, particularly since the societies outside the American Medical Association interested in hospital development are not asking nor expecting nor desiring the American Medical Association to shoulder the main expense in the development of the hospital situation. They do expect cooperation and assistance from the American Medical Association, and that cooperation can well be defined and be effective under small expense. The American Medical Association cannot afford to refuse to meet half way these many hospital interests in the development of this great public and professional need. The expense, if properly managed, unquestionably should not be greater than could have been safely borne by the American Medical Association during the last year, and the future outlook of the American Medical Association justifies the adventure.

The advice of the following gentlemen was sought on the hospital situation: Drs. W. J. Mayo, John M. Dodson, Richard C. Cabot, Adrian V. S. Lambert and A. R. Warner. There was no formation of these gentlemen as a committee nor meetings as a committee, but the request was made that they should act as advisers to the President. It is evident from their communications that in their opinion coordination between the American Medical Association and the other societies, as already mentioned, as represented in the American Conference on Hospital Service is essential for the best development of the hospital situation in the United States. The question of whether this should be done through a bureau in an already existing council of the American Medical Association or through a newly formed council on hospitals brings out differences of opinion. On the one hand, it is believed that the best cooperation can be obtained and the most effective work can be done through a council, rather than a bureau. On the other hand, it was bluntly stated that the other societies in the conference were eager for the cooperation of the American Medical Association but were jealous lest the cooperation should turn into an attempted domination by the largest society, and this was feared and would surely be resented. The discord and antagonism between the College of Surgeons and the American Medical Association was considered so deplorable that everything should be done to bring about its cessation and every endeavor must be exercised to prevent its increase and continuance.

There is a strong feeling among the other societies that a bureau of the American Medical Association under an existing council, as Health and Public Instruction, would create less antagonism than if a separate council were formed. The greatest antagonism of all would arise if the bureau were continued under the Council on Medical Education, since it is believed that the interest of medical education and of interns often runs counter to that of the smaller hospitals. The majority of opinion, however, favors the formation of a separate council rather than a bureau.

The belief has been confidently expressed that though working together in a common interest, mutual confidence and cooperation would soon replace distrust.

In considering the cooperation of various societies interested in hospital work, it seems beyond question that the best results will be obtained if each society continues to be responsible for that special hospital function in which it already has shown the predominant activity. That is, the American Medical Association to continue the predominant guidance of medical education and all matters relating to hospital interns; the College of Surgeons to continue the development of hospital standardization and hospital records, and concentrate its energies therein; the American Hospital Association to develop the administrative functions of hospitals and furnish to all concerned the information required for all physical needs of hospitals. No one group can master all these subjects, and no group should confine its interest to any one subject; but through mutual committees and exchange of information, all facts obtained by each should be forwarded to the other groups to be the common property and knowledge of all. The questions of the future development of nursing and the education of nurses press for solution, and the medical profession must do its share to solve the problems here presented and not stand aloof as it has done in the past. Occupational therapy and the reconstruction of the injured that they may obtain the greatest economic returns from their handicapped existence are new points of view to be reckoned with in estimating the value of the end-results of hospital work. The social service division in hospitals has won for itself recognition as a necessity in hospital responsibility to the patient. It has developed among the laity with tremendous rapidity; but, curiously enough, has won its position in the hospitals not so much against the opposition of the medical profession as it has in spite of the studied and unintelligent indifference of the majority of hospital staffs.

The American Medical Association contains among its Fellows many who are interested in all the various hospital activities, and it is the only society possessing men especially interested in the medical side of the care of the sick as contrasted with the surgical care. It most effectively can supervise the development of the hospital from the standpoint of what is best for the sick individual coming to regain his lost health.

The American Medical Association should not limit its interest to the activities of a bureau under medical teaching

or care of interns, or limit its interest in any way. The responsibilities of the medical profession in the future development of hospitals are as extensive as the hospital activities. The responsibility of the American Medical Association to its members is also equally broad. The American Medical Association can ill afford to neglect its opportunities to assist in the growth of hospital development, nor to refuse to cooperate with all the other societies interested therein. It would seem, therefore, that the interests of the American Medical Association in its relation to hospital development will best be conserved by the appointment of a standing committee on hospitals, and it is recommended that the House of Delegates create a Council on Hospitals and amend the By-Laws to this effect.

**Memorial Resolution**

Dr. A. T. McCormack, Kentucky, moved that when the House adjourns, it adjourn in honor of the memories of Dr. Emory Marvel, Atlantic City, N. J.; Dr. E. E. Southard, Boston, Mass.; Dr. Floyd M. Crandall, New York, N. Y.; Dr. C. E. Cantrell, Greenville, Tex.; Dr. C. P. Merriweather, Little Rock, Ark.; Dr. K. A. J. Mackenzie, Portland, Ore.; Dr. Abraham Jacobi, New York, N. Y.

Seconded and carried.

**Report of the Board of Trustees**

Dr. Philip Marvel, New Jersey, Chairman, presented the report of the Board of Trustees. He also presented a supplementary report, both of which were referred to the Reference Committee on Reports of Officers. (See page 1233.)

**Report of the Judicial Council**

Dr. M. L. Harris, Illinois, Chairman, presented the report of the Judicial Council, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws. (See page 1238.)

**Report of Council on Health and Public Instruction**

The report of the Council on Health and Public Instruction was called for. Dr. Victor C. Vaughan, Michigan, Chairman, requested the Secretary of the Council on Health and Public Instruction, Dr. Frederick R. Green, Illinois, to read the report.

Dr. Green presented the report, which was referred to the Reference Committee on Legislation and Public Relations. (See page 1239.)

**Report of Special Committee on Narcotic Drug Situation**

The Speaker stated that there was a special committee appointed last year on Narcotic Drug Situation in the United States, and that Dr. E. Eliot Harris, New York, was Chairman of this Committee. He asked Dr. Harris to present the report.

Dr. Harris requested Dr. A. T. McCormack, Kentucky, a member of the Committee, to present the report, which he did, and then the report was referred to the Reference Committee on Legislation and Public Relations.

The report will appear in THE JOURNAL next week.

The House then took a recess until 3 p. m.

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## *Second Meeting—Monday Afternoon, April 26*

The House of Delegates reconvened at 3 p. m., and was called to order by the Speaker.

**Report of the Council on Medical Education**

Dr. N. P. Colwell, Secretary of the Council on Medical Education, in the temporary absence of the Chairman of the Council, Dr. Arthur Dean Bevan, Illinois, presented the report of the Council, which was referred to the Reference Committee on Medical Education. (See page 1243.)

**Report of the Council on Scientific Assembly**

Dr. J. Shelton Horsley, Virginia, Chairman, presented the report of the Council on Scientific Assembly, which was referred to the Reference Committee on Sections and Section Work, and that part of the report relating to Amendments to the By-Laws was referred to the Reference Committee on Amendments to the Constitution and By-Laws. (See page 1251.)

Dr. Arthur T. McCormack, Kentucky, moved in behalf of the Committee to strike out the statement of Mr. Eugene Debs in the report of the Special Committee on Narcotic Drug Situation in the United States, and that the report be referred to the Reference Committee on Legislation and Public Relations.

Seconded and carried.

**Report of the Committee on Red Cross Medical Work**

Dr. Charles W. Richardson, District of Columbia, Chairman, presented the report of the Committee on Red Cross Medical Work, which was referred to the Reference Committee on Reports of Officers. (See page 1251.)

*(Insert Ends Here)*

**New Business**

Under the head of "new business," Dr. Randolph Winslow, Maryland, presented the following communication, which was referred to the Reference Committee on Miscellaneous Business:

NEW ORLEANS, April 25, 1920.

At a recent meeting of the Baltimore City Medical Society, a paper entitled "An Argument in Favor of the Establishment of a Medical Newspaper, Comparable to the Trade Journal of Other Walks of Life," was read by Dr. Bertram M. Bernheim.

The Society passed a resolution asking that this paper dealing with the advisability of establishing such a journal be laid before the House of Delegates of the American Medical Association for their consideration.

The Society fully realized the difficulties of carrying out such a project at this time, especially on account of the high cost of printing, but nevertheless felt that it was very essential to give this important matter the most serious consideration at this time, especially on account of the tremendous influence it would have on the education of the people of the United States in health matters.

Mr. Speaker, I move that the Secretary be given authority to distribute this paper to the members of the House and to the various officers of the Association, and that the paper be referred to the proper committee for its consideration and report of that part of the communication dealing with the proposed establishment of a Lay Medical Journal by the American Medical Association. THOMAS S. CULLEN.

Dr. Edward L. Hunt, New York, offered the following resolution, which was referred to the Reference Committee on Hygiene and Public Health:

*Resolved:* That the American Medical Association declares its opposition to the Institution of any scheme embodying a system of compulsory contributory insurance against illness, or any other scheme, which provides for medical service to be rendered contributors or others, provided, controlled or regulated by any State or the Federal Government.

Dr. James F. Rooney, New York, offered the following resolution, which was referred to the Reference Committee on Hygiene and Public Health:

*Resolved:* That the delegates from the State of New York, pursuant to their instructions, desire hereby to express their opposition to any scheme for Compulsory Health Insurance.

Dr. Charles J. Whalen, Illinois, and Dr. F. C. Warnshuis, Michigan, representing their State Delegations, supported the resolution offered by Dr. Rooney.

Dr. Frederic E. Sondern, New York, presented the following, which was referred to the Reference Committee on Hygiene and Public Health:

At the last Annual Meeting of the Surgical Section of the Medical Society of the State of New York, the following resolution was passed: "It is moved that the Chairman of this Section be empowered to appoint a Committee of Seven from the Medical Society of the State of New York and an honorary committee of seven American Medical Association members (Barker, Cushing, W. Mayo, Longcope, Billings, Tinker, Jones) to review the question of the sale of endocrine products and combinations without a physician's prescription and if they approve such action to bring the matter to the attenion of the American Medical Association House of Delegates for the purpose of further action to prevent the sale of endocrines without a prescription.

WHEREAS: The promiscuous use of the laity of preparations of the glands of internal secretion has led to manifest harm, and

WHEREAS: The uncontrolled use of potent glandular derivatives carries with it the danger of self-medication, be it

*Resolved*, That the Surgical Section earnestly request that the American Medical Association take the necessary steps to prevent any endocrine preparation being sold to the public except on a physician's prescription. This resolution will be endorsed this afternoon by the Association for the Study of Internal Secretions now in session.

Dr. F. F. Russell, U. S. Army, spoke of the necessity of having published the medical and surgical history of the World War, and stated that the Surgeon-General of the Army had asked Congress to appropriate $150,000 for this purpose. This history would make approximately fifteen volumes of 600 pages each, and that the edition would be 3,000 copies. He moved that a committee of three be appointed by the Speaker to draft a resolution approving in principle the use of this money by Congress for this purpose.

Seconded and carried.

### Ad-Interim Committee

The Secretary presented the following report for the Ad-Interim Committee:

NEW ORLEANS, April 25, 1920.

*To the House of Delegates, American Medical Association.*

GENTLEMEN:—Speaking for the Ad-Interim Committee, there is one brief matter to report.

About Oct. 1, 1919, a letter was received by the President of the American Medical Association from the Surgeon-General of the Army, containing this paragraph:

> "It is requested that you obtain from the members of the American Medical Association, who served in the World War, suggestions with regard to the function and administrative organization of the medical corps of the Army."

To which the President replied: "As President of the American Medical Association, it is my firm conviction that no greater service can be rendered by the profession of this country to the Army, than by giving constructive suggestions for your consideration, tending toward improvement and development of the Army Service."

A meeting of the Ad-Interim Committee was called and was held in Chicago to consider the request of the Surgeon-General. The question was of such importance that the Committee conferred with the Board of Trustees then in session. It was agreed between the Board of Trustees and the Ad-Interim Committee that it would be unwise at that time to proceed without further consultation with the Surgeon-General of the Army. A committee, consisting of the President of the American Medical Association, with Drs. Billings and Simmons, was appointed to confer with Surgeon-General Ireland. A conference was then held with the Surgeon-General, General McCaw and Colonel Russell, in Chicago, on December 1.

At this meeting, it was agreed: First, to request sanction from the House of Delegates that the American Medical Association should assist, in every way possible, in the development of the Walter Reed Medical School, which it is hoped will become the nucleus of a more comprehensive medical center project now in contemplation. Second, that an effort was contemplated to have sanctioned by the medical schools requiring an intern year before a medical degree in the Walter Reed or other Army hospitals as hospitals in which students could serve as interns and be duly credited for a degree by such service. Third, it was further agreed that when Congress should pass the Army Reorganization Plan, the finding on what basis the Medical Corps and Medical Reserve Officers should act, then the Surgeon-General would submit for constructive suggestions a plan of reorganization of the Medical Corps and Medical Reserve Corps to a Committee of Medical Reserve and Regular Officers having had experience at home and abroad in the recent war. Until such time as these preliminaries are accomplished, there appears to be no further action necessary to be taken by the Committee of the American Medical Association as appointed by the Ad-Interim Committee.

It is therefore recommended that the House of Delegates confirm the action of this subcommittee acting for the Ad-Interim Committee.

Dr. A. T. McCormack, Kentucky, moved that the action of the Ad-Interim Committee be approved.

Seconded and carried.

Dr. H. B. Gibby, Pennsylvania, Chairman, presented a supplementary report for the Committee on Credentials, stating that 107 delegates had been so far seated.

It was moved and seconded that the report be accepted.

Carried.

The Speaker appointed the following committee to prepare suitable resolutions asking Congress to publish as soon as possible the medical and surgical history of the War: Dr. Gerald B. Webb, Colorado; Dr. Walter R. Steiner, Connecticut, and Dr. Leroy Crummer, Nebraska.

Dr. John D. McLean, Pennsylvania, stated that a resolution was introduced last year in the House of Delegates urging that the publications issued by the Surgeon-General of the Army during the War be placed in such a position as to be available to the medical profession, but that he could not find any record of the resolution.

Dr. Frank Billings, Illinois, stated that this resolution was referred to the Board of Trustees. After conference with the Surgeon-General of the Army, other officers, and the Librarian, the Board of Trustees found there were no available books for distribution to the medical profession. He further stated that the supply of books published by the Army Medical Department and offered for free distribution had been exhausted.

On motion, which was duly seconded and carried, the House of Delegates adjourned to meet at 9:30 a. m., Tuesday, April 27, 1920.

*(To be continued)*

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**Causes of Death in U. S. Registration Area.**—The Census Bureau's annual compilation of mortality statistics for the death registration area in continental United States shows 1,068,932 deaths as having occurred in that area in 1917, representing a rate of 14.2 per 1,000 of population. Of these deaths, nearly one third were due to three causes—heart diseases, pneumonia and tuberculosis—and nearly another third resulted from the following nine causes: Bright's disease and nephritis, apoplexy, cancer, diarrhea and enteritis, arterial diseases, influenza, diabetes, diphtheria and bronchitis. The deaths from heart diseases (organic diseases of the heart and endocarditis) numbered 115,337, or 153.2 per hundred thousand population. Pneumonia (including bronchopneumonia) was responsible for 112,821 deaths, or 149.8 per hundred thousand. Tuberculosis in its various forms caused 110,285 deaths, of which 97,047 were due to tuberculosis of the lungs. The death rate from all forms of tuberculosis was 146.4 per hundred thousand, and from tuberculosis of the lungs, 128.9. Bright's disease and acute nephritis caused 80,912 deaths, or 107.4 per hundred thousand. Apoplexy was the cause of 62,431 deaths, or 82.9 per hundred thousand. Cancer and other malignant tumors caused 61,431 deaths, of which number 23,413, or 38 per cent., resulted from cancer of the stomach and liver. The rate from cancer has risen from 63 per hundred thousand in 1900 to 81.6 in 1917. Diarrhea and enteritis caused 59,504 deaths, or 79 per hundred thousand. Arterial diseases of various kinds, atheroma, aneurysm, etc., resulted in 19,055 deaths, or 25.3 per hundred thousand. Influenza was responsible for 12,974 deaths, or 17.2 per hundred thousand. Deaths from diabetes numbered 12,750, or 16.9 per hundred thousand. Bronchitis caused 12,311 deaths, or 16.3 per hundred thousand. Typhoid fever resulted in 10,113 deaths, or 13.4 per hundred thousand. Measles, whooping cough and scarlet fever were together responsible for 21,723 deaths of both adults and children, or 28.8 per hundred thousand. The rates for the three diseases separately were 14.3, 10.4 and 4.2, respectively. Deaths due to external causes of all kinds—accidental, suicidal and homicidal—numbered 81,953 in 1917, corresponding to a rate of 108.8 per hundred thousand population.—*Pub. Health Rep.* 34:1474 (July 4) 1919.

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SATURDAY, MAY 1, 1920

## POISON IVY, OAK AND SUMAC

There are many perennially recurring menaces to health which the physician is never allowed to overlook or forget, because the advent of afflicted patients serves as a potent reminder. If the cause of danger is an avertible one, like the fourth-of-July fireworks or the human contamination of water supplies bringing about a high morbidity rate for typhoid fever, it is well worth while to keep preaching the necessity of prevention. The campaigns of warning and education carried on annually by THE JOURNAL in relation to the two life-threatening features just cited, for example, have finally resulted in greatly reducing the harm done by eradicating the causes or at least reducing their frequency. At this season the publicity columns are likely, and with good reason, to direct attention to the impending menace of the mosquito and the undesirability of the fly.

The summer season is likewise the period when poisonous plants flourish and exert their noxious effects. Hence it is timely to send out the usual warnings about ivy and sumac poisoning.[1] The species of *Rhus* which are responsible for it infest virtually all parts of the country, except mountain elevations above about 6,000 feet and arid lands. They are not infrequently found growing along city streets, in parks and on private property as well as in the fields, pastures and woodlands of the country. Consequently there is scarcely a physician who has not encountered cases of intoxication from these poisonous plants. Indeed, medical experience testifies to the widespread discomfort and even serious illness which annually result.

It is generally agreed that the active principle common to the poison oak, ivy and sumac is toxicodendrol, an acid resin (not an oil, as stated in *Public Health Reports*). As little as 0.001 mg. is said to be sufficient to produce vesication of the skin. This remarkable potency must be kept in mind in attempting to explain the readiness of injury and the ease with which the poison "spreads" on the skin. Several commonly quoted peculiarities of ivy poison need to be critically considered. One of these is the belief that persons of suitable susceptibility may become poisoned without any contact whatever with the harmful plants. One frequently hears the statement that the mere observation or passing of the plants may be followed by intoxications. As toxicodendrol is nonvolatile, such alleged occurrences, often reported from apparently authentic sources, need careful consideration. The government experts have reached the conclusion that probably many cases supposed to have originated through the transfer of some volatile emanation have actually been due to direct or indirect contact. The exact manner in which the poisoning has occurred may readily be overlooked, since in many instances the appearance of the eruption is delayed for several days, and traces of the poison sufficient to produce injury may be conveyed by clothing or other articles long after contact with the plants. Sweet and Grant[1] add that numerous attempts to produce poisoning experimentally by emanations from *Rhus* plants, and from the active principle itself, have been unsuccessful. On the other hand, there is excellent foundation for the popular belief that smoke from the burning plants will give rise to irritation, and some of the worst cases of *Rhus* poisoning undoubtedly originate in this manner. Another tradition concerns the alleged immunity of certain persons. Here, too, careful investigation tends to indicate that this is at best one of degree, and that complete insusceptibility of man has neither been demonstrated nor induced.

In considering a rational treatment, it should be known that the irritant substance is soluble in alkalis, in gasoline and in alcohol, but is precipitated by lead acetate. At one time lead washes formed a popular treatment for ivy poisoning. They accomplish at best the precipitation of the poison in situ. It must then be removed in some way to avert further danger; and many persons are susceptible to intoxication by lead as well as by ivy poison. The widely advocated scrubbing with soap and hot water is efficacious only so far as it mechanically removes the toxicodendrol before it penetrates the skin. To spread the toxic agent inadvertently by washing rather than to remove it can only aggravate the danger. This applies particularly in the case of commonly used alcoholic lotions; their use must be thorough and liberal lest they merely serve to dissolve the poison and hence distribute it. The treatment with hot alkaline solutions of potassium permanganate is not as widely recognized as it merits to be. The principle involved consists in the destruction of the poison by this oxidative agent. The discoloration of the skin by the reagent can readily be removed by lemon juice or other means.

The physician has in this connection a larger function than the mere diagnosis and relief of ivy poisoning. He ought to lead in an effective crusade to destroy the

1. A timely paper on this subject has been published by the U. S. Public Health Service (Sweet, E. A., and Grant, C. V.: Ivy and Sumac Poisoning, Pub. Health Rep. 35: 443 [Feb. 27] 1920) from which various statements have been taken.

noxious vegetation, which flourishes in most unsuspected places. A campaign of popular education in the nature of the dangers involved as well as in the recognition of the harmful plant forms should be started every year. Communities should be waked up to the importance of eradicating the persistently growing poison ivy. It is surely not too much to expect that a few seasons of persistence fostered by medical sanction will decrease one of the causes of a "seasonal torment" that need not be with us.

## DOES HEMATOGENOUS JAUNDICE OCCUR?

The occurrence of jaundice as a symptom of conditions in which there is an obstruction of the bile ducts either outside of the liver or within the hepatic tissue has long been readily understood. In contrast with this obstructive or mechanical jaundice, there has been considerable discussion in recent years regarding the possibility of a nonobstructive type, referred to commonly as hemolytic jaundice. For the genesis of this it has been assumed that hemoglobin, the assumed precursor of the bile pigments, is somehow liberated in abnormal quantities in the circulation. From this free blood pigment bilirubin is supposed to be formed apart from any participation of the liver, in which the conversion normally takes place. Such considerations have therefore led to the differentiation of the usual "hepatogenous" jaundice from the less common "hematogenous" jaundice in which, no disorder of the liver or biliary ducts being apparent, the bile pigments were supposed to be found in the blood vessels or elsewhere in consequence of the destruction of erythrocytes and the conversion into bilirubin of the blood pigment thus liberated.

In order to establish the independent identity of the so-called hematogenous or nonobstructive jaundice, it is necessary to be able to exclude all conditions which might involve obstruction to the usual flow of bile at any point in its course from the liver cells. Among the facts offered in evidence for the existence of the nonhepatic jaundice has been the failure to find either macroscopic or microscopic indications of interference with secretion when necropsies in supposed cases have been performed. Furthermore, it is pointed out that in the alleged hematogenous jaundice the stools are normally colored, so that no lack of a discharge of bile into the bowel, such as occurs in biliary obstruction, can be assumed. Again, it is pointed out that a tendency to anemia associated with a susceptibility of the red blood corpuscles to hemolysis often constitutes the appropriate accompaniment of the jaundice symptoms. Finally, the removal of the spleen, an organ which has frequently been held responsible for the hemolytic phenomena, is said to abolish the jaundice of hematogenous origin; in the latter event the liver and its ducts can scarcely be assumed to play any part.

Without reviewing further the varied arguments that have been advanced in support of the occurrence of a jaundice independent of any liver factors, it should be understood that such statements have not been allowed to go unchallenged. The classic objection is found in the well-known experiments of Minkowski and Naunyn demostrating, for some species at least, that although extensive hemolysis accompanied by icterus can be induced by means of certain poisons, jaundice does not ensue if the liver has been previously removed. Again, it has repeatedly been pointed out that in cases of assumed hematogenous jaundice, the existence of minute obstructions of the bile passages and the occurrence of hepatic lesions discoverable only by careful histologic study undoubtedly occur.

Naunyn,[1] to whom we owe many important contributions to the knowledge of jaundice, in lately reviewing his extensive experience, has remarked that in considering so-called hemolytic jaundice in individual cases, all too little attention has been paid to the possible existence of obstruction factors. Thus, he asserts that there is no convincing evidence whether bile salts are actually absent or present in the icteric urine. The presence of these compounds would at once point to a hepatogenous origin of the jaundice. Naunyn, who is convinced that the liver plays a part in all cases, regards hemolytic jaundice as the outcome of an infectious disease in which a cholangeitis frequently is the conspicuous feature. The harmful agent, whatever it may happen to be, is believed to find its way to the liver as a rule from intestinal sources. The implication is that if more careful studies of the liver could be made at suitable times, hepatic damage sufficient to produce partial obstruction would be detected. In other words, icterus invariably means implication of the liver.

Gerhart [2] also has recently come to a similar conclusion. He points out that at times the stools of patients suffering from hemolytic jaundice are actually decolorized, or the pigments may be diminished. Hence, careful repeated observations may disclose symptoms of bile obstruction when they are unsuspected. The determination of the degree of obstruction, i. e., the complete or incomplete freedom of bile flow, is not easy, so that the argument of color in the feces must be used with caution by advocates of either side of the controversy. Gerhart likewise intimates the difficulty of excluding minute obstructive changes in the liver—alterations too small for obvious notice, yet sufficient to produce some reabsorption of bile in localized areas. He has also cited cases in which relief gained from extirpation of the spleen was only temporary, in harmony with the fact that the fundamental liver factors are by no means excluded through

1. Naunyn, B.: Der Ikterus und seine Beziehungen zu den Cholangien (Erkrankungen der Gallenwege), Mitt. a. d. Grenzgeb. d. Med. u. Chir. **21**: 537, 1919.
2. Gerhart D.: Beitrag zur Lehre vom hämolytischen Ikterus, Mitt. a. d. Grenzgeb. d. Med. u. Chir. **21**: 644, 1919.

this surgical procedure. Finally, numerous cases of hemolysis in which jaundice never occurs can be cited.

Before abandoning the theory of an independent hematogenous jaundice, it must be recalled, however, that Whipple and his associates in San Francisco have reported experimental evidence of the occurrence of bile pigments in the urine after injection of hemoglobin into dogs with the liver excluded from the circulation. What value is to be assigned to these observations in the face of the current tendency to reemphasize the significance of the liver in most, if not all, forms of jaundice remains to be seen.

### ALIMENTARY PROTECTION AGAINST HEMOLYTIC STREPTOCOCCI

Hemolytic streptococci have deservedly acquired the reputation of being dangerous invaders of the human organism. The menace which they represent has been aggravated of late by the repeatedly verified observations that these types of micro-organisms are frequently harbored not only by the sick, but also by normal persons. For this reason the unsuspected dissemination of the streptococci becomes a serious possibility. Cultural studies made in various army camps during the war gave indisputable evidence of the large extent to which the hemolytic streptococci are found in the throat and tonsils.[1] As an illustration, we may cite Smillie's[2] observation that about 50 per cent. of normal throats harbor these bacteria; the assertion of Blanton, Burhans and Hunter[3] that hemolytic streptococci could be obtained from the tonsils of normal persons in 90 per cent. and from the depths of the tonsils in 80 per cent. of their cases; and likewise the observations of Pilot and Davis,[4] showing that in the crypts of the faucial tonsils hemolytic streptococci occur in nearly 100 per cent. Such facts have been brought to bear on the question of the efficacy of complete tonsillectomy as a procedure for the elimination of a breeding place for hemolytic streptococci.

From the foregoing circumstances it becomes evident that large numbers of streptococci must be constantly passing beyond the pharynx into the alimentary canal. Furthermore, the same dangerous types can reach the gastro-enteric tract through the medium of food. What becomes of them? Are they readily destroyed by some protective mechanism in this part of the body, or do they continue to thrive and furnish an added menace by reappearing in the stools ready for further dissemination in sewage? These questions have recently been put to a test by Davis,[5] who examined the feces in fifty-three cases without finding hemolytic streptococci. They were absent even from the feces of scarlet fever patients, who almost always have these micro-organisms in their throats in very large numbers.[6]

As hemolytic streptococci are not ordinarily found in appreciable numbers in the gastro-intestinal tract of rabbits, though these animals are especially susceptible to experimental infection with *Streptococcus hemolyticus*, Davis introduced large amounts of virulent cultures of the organisms into the stomach of this species. Occasionally the bacteria pass through the canal under these exceptionally severe conditions and appear in the feces. As a rule, they do not thrive or gain a permanent foothold there. Rabbits with generalized streptococcus infection in the joints and blood showed no hemolytic streptococci in the intestinal contents.

One naturally inquires how this alimentary protection is acquired. Davis has referred it to the gastric secretion. Juice of normal acidity from man kills hemolytic streptococci within five minutes, though the gastric secretion in achylia may not kill them in several hours. This is only a new added instance emphasizing the enormous advantage of proper acidity in the stomach in controlling the alimentary flora. In the fecal mixture at body temperature, *Streptococcus hemolyticus* likewise does not seem to thrive long. Such facts may serve to exonerate this type of streptococci from primary responsibility for some of the manifestations of enteritis which were charged to it before the modern sharp differentiations cou'd be made. Whether or not hemolytic streptococci play a significant part in the production of pathologic lesions of the bowel, under conditions in which the defenses against the microbial invaders fail, remains to be more carefully investigated.

## Current Comment

### THE TREATMENT OF ATROPHY IN DENERVATED MUSCLES

When the nerve supply to a peripheral muscle is interfered with, atrophic changes in the latter are likely to follow. The atrophy, until recently, has usually been ascribed to the inactivity supposed to follow the loss of innervation. The routine treatment has therefore been of a character expected to counteract the disuse of the contractile tissue. Electric stimulation, massage, passive movements, hydrotherapy and other mechanical procedures have been employed to avert muscular atrophy, particularly when there seems to be a chance for a regeneration of the nervous connections if all the tissues concerned are kept in good physiologic con-

1. Some of the literature is reviewed by Tongs, M. S.: Hemolytic Streptococci in the Nose and Throat, J. A. M. A. **73**: 1050 (Oct. 4) 1919, in a paper representing studies concluded with the aid of a grant from the Committee on Scientific Research of the American Medical Association.

2. Smillie, W. G.: Beta Hemolytic Streptococcus, J. Infect. Dis. **20**: 45 (Jan.) 1917.

3. Blanton, W. B.; Burhans, C. W., and Hunter, O. W.: Studies in Streptococcic Infections at Camp Custer, Mich., J. A. M. A. **72**: 1520 (May 24) 1919.

4. Pilot, I., and Davis, D. J.: J. Infect. Dis. **24**: 386 (April) 1919.

5. Davis, D. J.: The Fate of Streptococcus Hemolyticus in the Gastro-Intestinal Canal, J. Infect. Dis. **26**: 171 (Feb.) 1920.

6. Ruediger: J. Infect. Dis. **3**: 755, 1906.

dition. The Cambridge physiologist Langley[1] suggested four years ago, however, that muscular atrophy in a denervated muscle is due, not to inactivity, but to continuous fibrillation. A connection between atrophy and fibrillation has long been recognized; thus, Barker[2] wrote in 1910: "Where the degenerative atrophy is due to lesion of the anterior horns or of the motor nuclei of the cerebral nerves, fibrillary twitching is commonly present." The relations of cause and effect are not clearly indicated here. If the disuse theory is to be abandoned, there seems to be no rational basis for the employment of therapeutic measures intended to promote the circulation and thus retain the nutrition and functional capacity of the muscles involved. Actual experimentation on animals with denervated muscles has, indeed, shown the futility of electrical stimulation and massage. As a denervated muscle is not a muscle at rest, the only indication of possible success in treatment thus far found has been in ionization with salts to stop the twitching.[3] The report recently published in THE JOURNAL by Hartman and Blatz[4] is a further record of inability to demonstrate benefit from either galvanic stimulation or massage. As was to be anticipated, the fibrillation was not checked. Although it may not be a welcome necessity to throw the current treatment of such muscular atrophy into the discard, particularly when no promising substitute procedures are suggested, a frank recognition of the truth alone can lead to progress.

## CHOLIN IN THE BODY

Cholin is a nitrogenous base which can be obtained as a derivative of the phosphatid lecithin by mild decomposition. Cholin is not devoid of physiologic potency, though it can scarcely be regarded as a pronouncedly toxic substance. Some closely related compounds, notably neurin and muscarin, are far more potent. A few years ago it was widely believed that cholin might arise from disintegration of lecithin in the nervous tissues, in which the lipoid is abundant, or elsewhere in the body, and might exhibit toxic effects. These were assumed, for example, to manifest themselves in certain types of nerve degeneration and in the cell destruction following application of roentgen rays. There is reason to believe now that many of the earlier reports of the presence of cholin in blood and tissue fluids rest on inaccurate procedures of analysis. Reid Hunt,[5] who devised a physiologic test that permits detection of as little as 0.00001 mg. of cholin, was unable to obtain evidence that this substance is of any significance in either physiologic or pathologic processes. A corroboration is further afforded by the studies of Guggenheim and Löffler[6] at Basel. They estimate that a liter of blood serum contains from 0.002 to 0.02 gm.; the same quantity of urine contains about the same proportion of cholin. In several diseases investigated, no characteristic variations in the content of cholin in the body fluids could be observed.

1. Langley, J. W.: J. Physiol. **50**: 337 (July) 1916.
2. Barker, L. F.: Diseases of the Nervous System, Osler's Modern Medicine **7**: 70, 1910.
3. Langley and Hashimoto: J. Physiol. **52**: 15, 1919. Langley, J. N., and Kato, I.: Ibid. **49**: 417, 1915.
4. Hartman F. A., and Blatz, W. E.: Treatment of Denervated Muscle, J. A. M. A. **74**: 878 (March 27) 1920.
5. Hunt, Reid: J. Pharmacol. **7**: 301, 1915.
6. Guggenheim, M., and Löffler, W.: Ueber das Vorkommen und Schicksal des Cholins im Tierkörper: eine Methode zum Nachweis kleiner Cholinmengen, Biochem. Ztschr. **74**: 207 (April) 1916.

## BOTULISM DUE TO OLIVES

The continued occurrence of fatal outbreaks of botulism poisoning caused by contaminated olives prompts our frequent reference to this situation. Many of the features of botulism outbreaks are still quite obscure; and in view of the urgent necessity for practical methods of prevention, every contribution to our knowledge of this form of food poisoning should be closely considered by sanitarians and health officials. The summary of the investigations of the Bureau of Chemistry on olive poisoning, given elsewhere in this issue,[1] contains material of general interest and practical application. Four of the five outbreaks reported in the summary were due to a toxin produced by the Type A of *Bacillus botulinus;* the organism responsible for the fifth attack is not yet differentiated. Type A is the type found in California, and differs from the type present in the Eastern states and apparently from that observed in Europe. The summary leaves one in some uncertainty as to whether green olives as well as ripe olives have been implicated in botulinus poisoning. In the Montana outbreak, olives stuffed with pimiento are considered to have been the source of the trouble, and in another instance "olive relish" in a tin container was the substance involved. It is not clear whether the "relish" was made of green or ripe olives, but it is certainly true that green and not ripe olives are commonly used for "stuffing." The title of the Bureau of Chemistry summary, on the other hand, seems to limit the poisoning to ripe olives, so that a clear statement on this point seems desirable. The important question as to whether or not *B. botulinus* contamination in canned food is always accompanied by physical signs of decomposition seems to be answered in the affirmative by the experience of the government investigators. They state that in all of the material examined by them in which *B. botulinus* was present, the odor was distinctly offensive. This characteristic is a doubtful safeguard, however, since olives washed, iced or served with highly flavored foods may not betray their dangerous nature, particularly to persons unfamiliar with the natural taste of ripe olives. The source of the odor does not seem to be cleared up by these investigations. Whether the disagreeable smells are due to the products of *B. botulinus,* or whether the other micro-organisms apparently always present in the imperfectly sterilized contents of the jar or can have given rise to the putrefactive conditions, is left undetermined by the evidence printed in the article cited. The conclusions of the Bureau of Chemistry workers that more efficient methods of sterilization should be employed, that brine packing should be modified, and that olives should be handled with the same degree of care and cleanliness as any other perishable food product seem abundantly justified.

1. DeBord, G. G.; Edmondson, R. B., and Thom, Charles: Summary of Bureau of Chemistry Investigations of Poisoning Due to Ripe Olives, this issue, p. 1220.

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

## ALABAMA

**Personal.**—Dr. Frank W. McCorkle, Huntsville, has resigned as assistant health officer of Madison County to become county health commissioner of Decatur County, Ga. Dr. Roscoe C. Stewart, Huntsville, has been selected as Dr. McCorkle's successor.

**Bacteriologic Society Organized.**—The Birmingham Bacteriological Society, with a charter membership of fourteen, was organized by laboratory experts and physicians at Birmingham, March 17. Dr. A. H. Olive was elected president; Miss Blanche Frazier, vice president, and Dr. James R. Bean, secretary-treasurer.

## CONNECTICUT

**Personal.**—Dr. Walter H. Brown, health officer of Bridgeport, has been appointed associate director, department of health service, national headquarters, American Red Cross. ——Dr. John W. Churchman, New Haven, professor of surgery in Yale University, has been named Officier de l'Académie with silver palms in recognition of work done as chief of the medical service of Military Hospital No. 32 bis, during 1916.——Dr. William B. Terhune, New Haven, has been appointed director of the division of mental hygiene of the state board of health.

## ILLINOIS

### Chicago

**Personal.**—Dr. William R. Cubbins has been appointed chief of the surgical staff of Cook County Hospital; Dr. Joseph A. Capps, chief of the medical staff; Dr. Channing W. Barrett, chief of the gynecologic staff; Dr. Edwin K. LeCount has been placed in charge of the pathologic laboratories and Dr. Julius Hess of the department of diseases of children.——Dr. Daniel H. Williams has been honored by the University of Pennsylvania by having his name given to a special organization among the medical students, known as the Daniel H. Williams Surgical and Oral Society. The prime object of the organization is to encourage research work.

**Teaching Health to Children.**—A child health school for the training of teachers of health to children will be held this summer at the University of Chicago. There will be a group of underweight children to serve as a demonstration of methods of conducting nutrition classes and teaching general health habits. Assistant Prof. Lydia J. Roberts of the department of home economics, who has recently returned to the university after making a nutrition survey of children for the U. S. Children's Bureau, will be the director, and Dr. Mendenhall of the Children's Bureau and Dr. Walter H. O. Hoffmann of Rush Medical School will serve as medical advisers.

## INDIANA

**Nurses' Home at City Hospital.**—The city board of health of Indianapolis has decided to start action to provide a bond issue for the construction of a nurses' home at the City Hospital. The undesirability of the living quarters has made it difficult for the hospital to keep up its required staff of nurses.

**Personal.**—Dr. James B. Young, Cumberland, has been appointed associate medical director of the Indianapolis Life Insurance Company, succeeding Dr. Mitchell A. Devaney, deceased.——Dr. Charles C. Crampton, Delphi, has been elected commander of the local post of the American Legion.

**Postgraduate Course.**—The Indiana University School of Medicine will give a postgraduate course in disease production and immunity in its department of pathology, beginning June 1, 1920. The course will cover a period of six weeks of lectures and laboratory work.

## IOWA

**Clinic at Grinnell.**—A free clinic for children needing medical or surgical attention has been established at St. Francis' Hospital, Grinnell.

**Personal.**—Dr. Jefferson D. Blything has been appointed city physician of Davenport on recommendation of the Medical Society of Davenport.—— Dr. James W. Richards has been appointed health physician of LeClaire.——Dr. Alphonse L. Hageboeck, Davenport, was elected commodore of the Davenport Boat Club, April 5.——Dr. Charles L. Barewald has been elected mayor of Davenport.——Dr. Don M. Griswold, Iowa City, has accepted the chair of public health and hygiene in the Medical School of the University of Iowa, and by this acceptance becomes state epidemiologist.

## MARYLAND

**Personal.**—Dr. William H. Welch, for thirty-five years pathologist of Johns Hopkins Medical School and now director of the School of Hygiene and Public Health, celebrated his seventieth birthday anniversary, April 8.——Dr. Winifred Cullis, professor of physiology in the London School of Medicine for Women, University of London, and chairman of the Committee on International Relations of the University Women of Great Britain, spoke in Baltimore at the College Club recently both to the students of Goucher College and to the College Women of Baltimore.

**University of Maryand Enlarged.**—A bill recently passed by the Maryland legislature combines the Maryland State College of Agriculture with the University of Maryland School of Medicine under the name of the University of Maryland. The new institution now possesses, therefore, a college of arts and sciences, a military school and schools of medicine, dentistry and pharmacy. A new board of nine trustees has also been established. The legislature also appropriated $42,500, each year, for the medical school for the next two years and in addition appropriated $185,476.85 for the other departments of the university for the year 1921, and $165,416.89 for the year 1922. Another appropriation of $203,000 was made for buildings and equipment. This adds one more to the list of states having state universities, the total now being twenty-nine.

## MICHIGAN

**Clinic Opened.**—A clinic for the treatment of crippled and deformed persons has been opened in Detroit under the auspices of the local board of health. The expenses are being paid by the Sigma Gamma fraternity, and members of that organization are serving as attendants. Drs. Carroll L. Storey and Nathaniel Ginsberg are in charge of the clinic.

**The Carstens Semicentennial.**—Members of the Wayne County Medical Society gave a testimonial dinner, April 13, in honor of Dr. J. Henry Carstens, Detroit, who has just completed his fiftieth year as a practitioner of medicine. Dr. George E. McKean, president of the Wayne County Medical Association, officiated as toastmaster, and speeches touching on different phases of Dr. Carstens' life were made by Drs. Daniel La Ferte, Theodore A. McGraw, Guy L. Kiefer, Preston M. Hickey, Angus McLean, John N. Bell and H. Wellington Yates.

## MINNESOTA

**Personal.**—Dr. Leroy E. Doolittle has been appointed school physician of Duluth.——Dr. Archibald L. McDonald, Duluth, has been elected president of the St. Louis County Medical Association and Dr. Herbert G. Lampson, secretary.

**Health Work in State.**—Following out an idea which originated when Dr. Walter R. Ramsey, St. Paul, suggested that the children's specialists of the state organize and bring their advice to the inhabitants of the counties rather than to restrict expert diagnosis of the children's cases to people living in the larger cities, twenty-four specialists on diseases of children, ten dentists, fourteen medical directors of tuberculosis sanatoriums, many eye and ear experts, the Minnesota Obstetrical and Gynecological Society and a trained dietitian have formed an advisory staff for the Minnesota Public Health Association and have conducted health clinics in almost every county of the state during the last year.

## NEW YORK

**Poster Contest Time Limit Extended.**—The time limit of the contest started by the bureau of venereal diseases of the state department of health in which a prize of $100 was offered for the best poster illustrating the quotation "Healthy Parents Head Happy Families," and which was noted in THE JOURNAL of March 13, has been extended from May 1 to June 1.

**Clean-Up Week.**—In a letter to mayors, village presidents and boards of health, Dr. Hermann M. Biggs, state commissioner of health, has designated the week beginning April 26 as the annual clean-up week. The commissioner emphasizes the necessity of impressing the citizens of each community with the date and purpose of clean-up week in order that the large amount of filth and rubbish which has accumulated during the winter may be collected and properly disposed of. Local authorities are urged to make adequate provision for the prompt removal and destruction of all such material. The suggestion is made that a local committee composed of representatives of various organizations be formed in each community for the purpose of supervising the work.

### New York City

**Jacobi Memorial.**—The New York Academy of Medicine will hold a memorial meeting in honor of Dr. Abraham Jacobi's ninetieth birthday anniversary, May 6, at 8:30 p. m. A bas-relief of Dr. Jacobi will be presented by George McAneny and will be accepted by the president of the academy, Dr. George David Stewart. The principal address will be delivered by Dr. George E. Vincent of the Rockefeller Foundation.

**New Quarantine Regulations.**—Amendments to the sanitary code provide the following minimum periods of quarantine: diphtheria, twelve days from onset, after which until two cultures taken not less than twenty-four hours apart, preferably from both nose and throat, fail to show the presence of diphtheria bacilli; scarlet fever, thirty days after onset, providing discharges from nose and ears have ceased; cerebrospinal meningitis, fourteen days from onset; acute anterior poliomyelitis, three weeks from onset; typhoid fever, until ten days after the patient's temperature reaches normal, and further until two specimens of feces collected after an interval of at least twenty-four hours are found to be free from typhoid bacilli.

### PENNSYLVANIA

**Institutions Closed.**—The Emergency Hospital, Erie, established to meet the scarlet fever epidemic, closed for the reception of patients, April 3, and will definitely close the end of this month.——State Health Department Dispensary No. 11, Chambersburg, established by the late Dr. H. X. Bonbrake, was discontinued, March 26.

**Personal.**—Dr. James F. Trimble, Greensburg, has been appointed medical director of Westmoreland County.——Dr. Fred Wade Paton, Bradford, medical director of McKean County, has resigned.——Dr. Isaac H. Shelly, Jr., Ambler, has been appointed a member of the eye, ear, nose and throat staff of the Montgomery County Hospital and also consultant at the Norristown State Hospital.

**New Officers.**—At the annual meeting of the board of directors of the Pennsylvania Society for the Prevention of Tuberculosis held in Philadelphia, April 14, Dr. James M. Anders, Philadelphia, was elected president of the board of directors, succeeding Dr. Thomas McCrae, Philadelphia; Drs. Joseph S. Neff, William D. Robinson, Philadelphia, and Dr. William C. White, Pittsburgh, were elected vice presidents; Dr. Ware Brinton, Philadelphia, was made secretary; J. William Hart, treasurer, and Drs. Elmer H. Funk, Philadelphia, and Thomas McCrae, Philadelphia, were elected members of the board.

**State Police to Aid in Fighting Disease**—Important cooperative work between the state police force and the state department of health in the campaign for eradication of social diseases has been arranged and hereafter when state policemen make arrests in raids, medical officers will accompany them and conduct examinations. If necessary, state policemen will assist the health authorities in maintenance of a quarantine against persons found suffering from infectious diseases. The details of the cooperative plan were worked out by Major Lynn G. Adams, the superintendent, following an address to the troop officers by Dr. Sigmund L. Gans of the department of health, who outlined the procedure under the act of 1919. State police work in the bureaus of fire protection and criminal identification will be materially expanded this year.

### Philadelphia

**Appropriation for Insane.**—An ordinance to appropriate $50,000 to improve conditions of the insane at the Philadelphia General Hospital and to create thirty-eight important positions was approved by council's health committee, April 22, and referred with a favorable recommendation to the finance committee. The new system established would range from a medical director at $5,000 a year to two hydrotherapists at $900 a year each, requiring an appropriation of $35,373 annually. The ordinance would also appropriate $14,000 for alterations necessary for the introduction of new methods of treatment of patients at the institution.

**Personal.**—Drs. John Welsh Croskey and Lawrence Webster Fox have been elected censors of the Philadelphia County Medical Society to fill the vacancies caused by the resignations of Dr. Jay Frank Schamberg and Dr. Judson Deland.——Dr. John Blair Spencer, physician in chief of the department of public welfare, returns this week from Washington, D. C., where he went about ten days ago to submit to an operation necessitated by an injury received while serving in the Navy during the late war.——Dr. Andrew A. Cairns, chief of the city health bureau, has been appointed a member of the advisory board of the department of health to succeed Dr. Joseph S. Neff, former director of health and charities, who resigned.——Dr. Miriam Warner has been appointed physician to the women patients of the Holmesburg Institutions, including the Home for the Indigent and Brown's Farms.——Dr. Randle C. Rosenberger has resigned as director of the pathologic laboratories at the Philadelphia General Hospital.

### SOUTH CAROLINA

**Personal.**—Dr. T. B. Brown, Charleston, has taken charge of the Anderson Clinic, succeeding Dr. L. W. Blake, resigned. ——Dr. Reuben G. Hamilton, Rockton, has been elected head of the public health service of Fairfield County, with headquarters at Winnsboro.

**Increased Appropriation.**—The Medical College of the State of South Carolina has received an appropriation from the state of $71,000 for maintenance, as compared with $49,500, the previous appropriation. An additional appropriation of $60,000 was made for the physiology building and equipment.

**Medical Bill Now Law.**—Governor Cooper on March 10 signed the medical bill, requiring all chiropractors, osteopaths, homeopaths and other healers to submit to examination before the state board of medical examiners.——The state board of medical examiners held a meeting, April 19, at Greenville, to formulate the new rules for the examination and licensure of practitioners, and the first examination will be held on June 22.

**To Study Trachoma.**—Drs. Edward F. Parker, Charleston; Charles W. Kollock, Charleston; Edwin R. Wilson, Sumter; Pinkney V. Mikell, Columbia; E. Mikell Whaley, Columbia; Martin Crook, Spartanburg, and Waller H. Nardin, Anderson, have been appointed by Dr. James A. Hayne, Columbia, state health officer, as a committee to investigate trachoma and other infectious diseases of the eye, and to formulate rules and regulations to prevent the spread of these diseases among schoolchildren.

**New State Officers.**—The South Carolina Medical Association, at its seventy-second annual meeting, held in Greenville, S. C., April 20 and 21, elected the following officers: president, Dr. Washington P. Timmerman, Batesburg; vice presidents, Drs. Miles J. Walker, York; William A. Boyd, Columbia, and William W. Fennell, Rock Hill; secretary-treasurer, Dr. Edgar A. Hines, Seneca, and councilors, Drs. Archibald E. Baker, Charleston; Samuel E. Harmon, Columbia; Thomas L. W. Bailey, Clinton; Leland O. Mauldin, Greenville; T. N. Duten, York; Charles R. May, Bennettsville; Harry L. Shaw, Sumter, and Leighton A. Hartzog, Olar.

### VIRGINIA

**To Fight Swamp Menace.**—The health committee of Newport News has made recommendation that the council appropriate an emergency fund of $5,000 to defray the expenses of the fight against the malaria menace in the swamps and marshes in the city.

**Institute for Colored Physicians.**—By the aid of the missionary fund of the National Tuberculosis Association, the colored physicians of Virginia have been given a course of lectures and clinic work in tuberculosis at the Piedmont Sanatorium, Burkeville. The instructors comprise the heads of the three tuberculosis sanatoriums of Virginia and the medical director of the state tuberculosis association. Patients of all stages of tuberculosis were examined and the practitioners were drilled in the technic of chest examinations. The course will be repeated in June.

**Health Center for Norfolk.**—The public health department of Norfolk, through its director, Dr. Powhatan S. Schenck, has for several years been developing plans for a public health center for the city. A large amount of money has been secured for the work and plans for the buildings have been prepared. The proposed site for the buildings is the court house block at Bank Street. In the middle of the group will be the old Academy building which will be remodeled to contain the children's court, domestic relations court and other enterprises connected with these courts. On the sides and to the front of this will be grouped the general medical building, the prenatal building, the detention building, and administration and emergency buildings. The latter will be equipped so that it may be used for accident, operation and emergency cases. The general medical building will be fully equipped to treat all diseases except contagious diseases.

## CANADA

**Mental Hygiene Course.**—The social service department of the University of Toronto is completing enrolment in the special extension course in mental hygiene. About thirty-five will take lectures in this course which will be conducted daily until June 11. Applications have come from Hamilton, Ottawa and other parts of the province of Ontario.

**Harvey Club Election.**—At the annual meeting of the Harvey Club, London, Ont., the following officers were elected: honorary president, Dr. Clarence M. Crawford, Whitby; president, Dr. Francis W. Hughes, London; vice president, Dr. John I. Ferguson, London; secretary, Dr. James W. Crane, London (reelected), and treasurer, Dr. Uriah E. Bateson, London.

**Venereal Disease Council.**—At the meeting of the Ontario committee of the Canadian Council for Venereal Diseases held, March 5, in Toronto, the lieutenant-governor was elected honorary president; Dr. Charles A. Hodgetts, Ottawa, president; Dr. Storms and Mrs. Torrington, Toronto, were elected vice presidents; Dr. Robert R. McClennahan, Hamilton, was elected secretary, and M. L. Wood, treasurer.

**Six-Year Medical Course.**—Recently a conference was held in Montreal at which were present representatives of the medical department of the University of Toronto and the University of McGill. The delegation representing the University of Toronto included Profs. John J. Mackenzie, Benjamin P. Watson, Duncan A. L. Graham, Velyien E. Henderson, Drs. Edward Stanley Ryerson and Alexander Primrose, C. B. No final decisions were reached at that conference, but there was a preliminary discussion of the curriculum to be adopted by both institutions from the first to the sixth year. Both Toronto and McGill had decided to introduce the six-year course before the war.

**Canadian National Council for Combating Venereal Diseases.**—The first municipal committee in connection with the above organization has been organized in Toronto with Hon. Mr. Justice Riddell as honorary chairman; Dr. Frederick W. Marlow, chairman, and Dr. Gordon A. Bates, secretary. Coincident with the organization of this committee, there was shown in Massey Hall, Toronto, the film drama "The End of the Road." About 17,000 viewed this moving picture, and at the same time addresses were delivered of an educational character. The first work of the national council committee will consist in general education among the people to prove to them the seriousness of the problem of venereal diseases. Government treatment schemes will be inaugurated in various parts of the dominion. An endeavor will be made to secure a large membership.

**Tuberculosis Board for Military Hospitals.**—A board of tuberculosis sanatorium consultants has recently been appointed by the director of military services of the Soldiers' Civil Re-Establishment. The personnel of this board is as follows: Drs. Charles D. Parfitt, Gravenhurst; John R. Byers, Ste. Agathe des Monts; William M. Hart, Qu'Appelle, Sask.; Arthur F. Miller, Kentville, N. S., and David A. Stewart, Ninette, Man. This board will visit the twenty-three sanatoriums throughout Canada in which patients of the department are receiving treatment. The board will study the whole situation in Canada with regard to the treatment of tuberculosis occurring among soldiers, and as far as possible will bring about uniform standards of treatment, equipment, records, etc. The medical superintendents of these sanatoriums have been instructed to cooperate in every way with the board.

**Personal.**—Surg.-Gen. John T. Fotheringham left Toronto, March 18, for a trip to the West Indies.——Dr. Gerald Allison, Picton, Ont., has returned after serving with the R. A. M. C. in Turkey.——Dr. Russell J. Collins, Kentville, N. S., has been appointed medical superintendent of the Balfour Sanatorium, Balfour, B. C.——Dr. William H. G. Aspland, Toronto, who was with the British Red Cross Society in 1914, is now living in Yorkshire, England.——Dr. Richard D. Cowan, Toronto, after three years of war work, has engaged in graduate work in the Middlesex Hospital, London, England.——Dr. Helen MacMurchy, Toronto, has been appointed head of child welfare under the department of public health, Ottawa.——Dr. Thomas J. McNally, Guelph, who has been district medical officer of health for the counties of Grey, Bruce and Simcoe, Ont., has been transferred to the Sarnia district.——Dr. George L. Sparks, London, after returning from overseas a short time ago, was appointed district medical officer of health for Fort William, Ont.

## GENERAL

**Tri-State Physicians Meet.**—The forty-seventh semiannual meeting of the Northern Tri-State Medical Association of Indiana, Ohio and Michigan was held in Goshen, Ind., April 8, in connection with the annual session and as the guest of the Elkhart County Medical Association.

**International Opium Convention.**—Under terms of the Versailles Treaty of Peace and the Covenant of the League of Nations, all signatory nations are under obligation to ratify the opium convention and to enact the necessary legislation for its enforcement within twelve months. General supervision over the execution of the convention is entrusted to the League of Nations.

**Post-Graduate Hospital Endowment Fund.**—The New York Post-Graduate Medical School and Hospital reports that a total of $751,694 has been reached in its $2,000,000 endowment fund campaign. Among the large contributors were: Mrs. James Farrell, $25,000; Mrs. Stephen Olin, $500; J. M. W. Hicks, $500; Mrs. Vanderbilt, $500; F. W. Jennings, $500, Hornblower, Miller, Garrison and Potter, $500; Anonymous, $5,000; Henry J. Davis, $500; Fred Huyler, $500; Warner B. Leeds, $500, and Artemus Ward, $1,000. An anonymous contribution of $20,000 has also been received.

**Military Surgeons Hold Meeting.**—At the annual meeting of the Association of Military Surgeons of the United States held in New Orleans, April 22 to 24, under the presidency of Col. Joseph A. Hall, M. C., Ohio N. G., Cincinnati, the following officers were elected: president, Asst. Surg.-Gen. John W. Kerr, U. S. P. H. S., Washington, D. C.; vice presidents, Med. Dir. (Captain) Frank M. Pleadwell, M. C., U. S. Navy, Washington, D. C.; Col. Charles Lynch, M. C., U. S. Army, Washington, D. C., and Col. David S. Fairchild, Jr., M. C., Iowa N. G., Clinton, Iowa, and secretary-treasurer and editor, Col. James Robb Church, M. C., U. S. Army, Washington, D. C. (reelected). The 1921 meeting will be held in Washington, D. C., probably in October.

**Bequests and Donations.**—The following bequests and donations have recently been announced:

Paterson, N. J., General Hospital; St. Josephs' Hospital, and Barnert Hospital, each $5,000; Paterson Orthopedic Association and Paterson Eye and Ear Infirmary, each $4,000, by the will of William H. Heap, Paterson.

Paterson, N. J., General Hospital; St. Joseph's Hospital, and Barnert Hospital, each $5,000, by the will of Lewis Levi, Paterson.

Woman's and St. Luke's hospitals, New York City, each $5,000; Society of Widows and Orphans of Medical Men of New York City, $1,000, by the will of Mrs. Anna M. Sandham.

Children's Hospital, Philadelphia, $1,000, and after the death of one relative $10,000, by the will of Mrs. Francis A. Roberts.

Philadelphia Home for Incurables and Philadelphia Home for Consumptives, each $1,000, by the will of Catherine A. Delk.

New York Post-Graduate Medical School and Hospital Endowment Fund, $250,000, contingent on the raising of $1,000,000, by James F. Brady and Vincent Astor.

## FOREIGN

**Personal.**—The Copenhagen University has awarded the Salomonsen prize to Prof. V. Ellermann for his works on leukemia in fowls. The fund for promotion of research on diabetes has been awarded to Dr. H. C. Hagedorn.——Prof. Vittorio Maragliano, son of Senator and Professor Maragliano of Genoa, has had two fingers amputated on account of roentgen injury in his professional work as radiologist.——Prof. K. Landsteiner of Vienna has accepted a call to the Hague as chief of the public hospital, and has resigned his post as director of the institute for pathology at the Wilhelminenspital a Vienna.

**Nicolai and the Berlin Medical Students.**—THE JOURNAL mentioned Jan. 26, 1918, that Prof. G. F. Nicolai on his return to Germany had been imprisoned for publishing a

book, "The Biology of War," in which he pointed out the warping of the conceptions of German scientists and military men in the course of hostilities, disregarding humanity and citing specific instances. Nicolai escaped by aeroplane to a neutral country, but returned later and was recently appointed professor extraordinary by the minister of public instruction, K. Haenisch. When he opened his course of lectures, the students created such a disturbance, denouncing him as a traitor, that he has been unable to continue the course. The governing board of the University of Berlin has also recently formally declared that he is unworthy of a chair in the university "as he had forsaken the country and his civilian duties and had published in a neutral country a book which placed poisoned weapons in the hands of the foe." The *Deutsche medizinische Wochenschrift* comments that "members of all parties must agree in this judgment, and the grounds therefor. It is remarkable, however, that the university authorities did not protest in this way at the time Nicolai was given the chair last October." Before the war he was privat-docent of physiology.

### Deaths in Other Countries

Dr. **M. T. Buch** of Helsingfors, author of manuals "Physiology of Appetite and Hunger," "Physiology of Digestion" and smaller works along these lines, aged 70.——Dr. **Norberto Barbot** of Montevideo, formerly chief of the public health service in the state of Rio Negro and for many years the leading physician of Fray Bentos, aged 57.——Dr. **Oriol Solé Rodrigues,** the minister representing Uruguay at Lima, Peru, aged 60. He had been a member of the Uruguayan parliament and minister from Uruguay at Hamburg, and later in Italy and Brazil until appointed minister plenipotentiary to Peru, aged 60. —— Dr. **Isidro Lobo,** formerly inspector general of the medical department of the Argentine army with which he had been connected since 1883.—— Dr. **A. Steiger,** a well known ophthalmologist of Zurich.—— Dr. **R. Archambault,** medical inspector of the port of Rosario, Argentina.——Dr. **V. Ferreira dos Santos,** who occupied a high position in the medical department of the army of Portugal.

## LATIN AMERICA

**Scientific Board in Nicaragua.**—In accordance with the recommendation of the superior board of public health, the government has established a scientific board for the eradication of yellow fever. The board will have charge of all matters relative to yellow fever cases and the prevention of the disease. Telegraph, telephone and postal frank privileges have been granted to this body.

**New Sanitary Convention Between Brazil, Uruguay and Argentina.**—Uruguay has taken the lead in the effort to unify sanitary requirements in regard to third class passengers arriving at their ports. The president and public health service of Uruguay ask that each of the countries will appoint a delegate to confer and adopt a uniform plan of requirements with which the navigation companies will have to comply.

**Tribute to Two Men of Science.**—Under this heading the *Crônica Médica* of Lima, Peru, publishes an official notice from the president of the republic to the effect that as it is the duty of the public powers to present to the gratitude of the people and of posterity the memory of men who by their knowledge and character have contributed to national progress, he has ordered that statues of the two physicians, Dr. H. Unánue and Dr. B. Herrera, be erected in the university park at Lima at the expense of the state.

**Dismissal of Dr. Ribeyro.**—Dr. Ramón Ribeyro, director of the National Institute of Vaccine of Peru, has just been dismissed from his position by the director of public health. In his letter commenting on this matter, Dr. Ribeyro recalls that he had occupied this position for twenty-four years and had just been appointed corresponding member of the Society of Exotic Pathology of Paris because of his work on tropical diseases.

**Academy of Medicine Offers Prize.**—The Academy of Medicine of Porto Rico offers its fifth annual prize for the best work on "A Practical and Economic Plan for Rural Sanitation in Porto Rico." The prize amounts to $500. The contest is open only to physicians located in Porto Rico, and the articles must be typewritten, make no mention of the author's name (this should be given in a separate closed envelop, having the same motto as the original article), and be in the hands of the secretary of the academy, Dr. P. Gutiérrez Igaravidez, San Juan, on or before Sept. 15, 1920.

# Government Services

### Health Conditions of the Army

During the week ending April 16, there was a slight increase in the hospital admission and death rates, but a decrease in the number of new cases of communicable diseases. Measles is reported in numbers from several stations, but nowhere has it assumed epidemic proportions. Of fifteen deaths from disease, eight were caused by tuberculosis, and two by pneumonia. Eight new cases of influenza, five of pneumonia, three of scarlatina, two of diphtheria and three of varicella are reported from the American Expeditionary Forces in Germany.

### Public Health Service Hospitals

Up to date, twenty-one army hospitals have been turned over to the Public Health Service by the War Department. No others are now available, and the Committee on Public Buildings and Grounds will be called on to appropriate at least $15,000,000 for the purchase and construction of additional hospital units to take care of immediate requirements for ex-service men under the War Risk Insurance Act. In the Urgent Deficiency Bill, just approved by the House Committee on Appropriations, $7,666,000 is placed at the disposal of the Public Health Service for its fiscal requirements to June 30, 1920.

### Army Reorganization Bill

The Army Reorganization Bill has passed both the Senate and House, but because of some differences it will be submitted to a conference committee. The House bill fixes the entrance age limit of an Army medical officer at 54 years; the Senate bill at 50 years. The former provides for the promotion of medical officers according to length of service by a board of from three to five officers, subject to review by the Secretary of War; the Senate bill provides promotion to the grade of captain after three years' service, to major after fourteen years, to lieutenant-colonel after twenty years and to colonel after twenty-six years. Both bills provide that medical officers who were in service during the World War and are now in the Medical Reserve Corps will be eligible for appointment in the regular Army after July 1, 1920. Commissioned rank for nurses is prescribed in both bills.

# Foreign Letters

## LONDON

April 10, 1920.

### Military Control of the Army Medical Department

In the House of Commons, Lieutenant-Colonel Fremantle delivered a powerful criticism of army medical administration. He pointed out that the director-general of the army medical service was responsible only for the provision of physicians, nurses, drugs, instruments and dressings. When a breakdown occurred it was almost invariably in the provision of hospitals, or equipment, or in transport arrangements. The tragic breakdowns in the Crimean and South African wars were due to the difficulty of coordination. The result was the hospitals commission, which recommended that the director-general of the army medical service should be on what was then called the army board; but all that was arranged was that he should be summoned to the army council whenever his advice and special knowledge were required. But who knew when the advice of the specialist was required? Expeditions were undertaken without consulting him. The report of the Dardanelles commission showed that the errors were due largely to the lack of cooperation and provision in thinking out the probabilities. A committee of investigation recommended that the director-general of the army medical

services should come under the adjutant-general, because sanitation was so much a question of discipline. It was; but hospitals depended on other things that came from the quartermaster-general, from military intelligence and from the chief of the general staff, and there was no reason why hospitals or other branches of the medical service should come under any one of those three officers. An officer was needed on the army council who would be responsible for all materials and supplies, and who would have the power required to get hospitals efficient. Lord Esher, who presided over the committee referred to, had said: "How much the suffering undergone by our soldiers in the war was due to the shortsightedness of my committee will never be known." Certainly, the control of the adjutant-general's branch of the army medical corps was and is responsible, not only for the early failure to grip the medical factors of this war, but for the hampering conditions under which Sir Alfred Keogh worked. His triumphs and those of the army medical corps were achieved in spite of obstacles that the subordination of science to ignorance, of elasticity to military discipline, explains but cannot justify. Lieutenant-Colonel Fremantle appealed to the government to strengthen the army council by placing on it the director-general of medical services and to free from the control of a purely military officer a body of men mostly volunteers from highly trained professions and dealing with technical difficulties altogether outside the orbit of vision in which the soldier pure and simple habitually moved. Mr. Churchill, secretary of state for war, complimented Lieutenant-Colonel Fremantle on his speech, and promised that it would be carefully studied and examined by those in the war office specially concerned with the subjects mentioned.

### An Appeal for Medical Journals from Austria

In the *Times*, Sir Clifford Allbutt makes an appeal on behalf of Austrian physicians and students. He has heard from Professor Wenckebach that their penury is so great that they cannot afford a cent for books or journals, home or foreign. He therefore appeals to Great Britain for recent medical and scientific literature for which students in all faculties are athirst. He describes the zest with which a group of students will pounce on any fragment of a journal which may drift into their bare libraries. Sir Clifford Allbutt therefore begs the readers of the *Times* not to throw away journals, books or papers, and perhaps to make some little sacrifice to spare such literature for the Vienna University. A London firm has undertaken to forward them in bulk.

### The Rationing of Butter and Sugar in the Case of Invalids

The only foods now rationed are butter and sugar. The maximum amount of government butter which food committees can grant is 4 ounces weekly in ordinary cases and 8 ounces in cases of tuberculosis, diabetes and cancer. Applications for extra butter must be accompanied by a certificate that failure to obtain the extra ration would either (*a*) be definitely prejudicial to the health of the applicant or (*b*) delay his recovery. A certificate to the effect that the applicant is unable to digest margarin will no longer be required in view of the difficulty experienced by physicians in giving such certificates. In making this concession, the ministry impresses on physicians that there is still a serious shortage in supplies of imported butter, and asks for their cooperation in limiting such applications to cases in which they are fully satisfied that, owing to exceptional circumstances, margarin will not meet the needs of the patient. Extra allowances of sugar may be granted up to 1 pound weekly (inclusive of the ordinary ration) to applicants unable to take solid food, either on account of difficulty in swallowing or because their disease necessitates a "slop" diet, and up to 10 ounces weekly (inclusive of the ordinary ration) to children under 2. Food control committees will not themselves deal with, but with forward to the medical section of the ministry applications for extra sugar in the cases of: (*a*) elderly persons who by reason of infirmity are on a specially limited diet; (*b*) delicate children who are unable to eat much solid food or whose parents are, through lack of means, unable to provide substitutes for sugar, and (*c*) tuberculous patients whose diet is certified by the physician to be limited either by reason of poverty or because of the disease's being in an acute stage, and when a larger allowance is recommended than the committee itself is empowered to grant.

### A National Institute of Psychology and Physiology as Applied to Industry and Commerce

An appeal for the foundation of such an institute has been made with the support of leaders of industry; psychologists and physiologists, like Dr. C. S. Meyer of Cambridge, Prof. C. S. Sherrington, and Prof. E. H. Starling; and educationists such as Sir Robert Blair and Sir Alfred Keogh. Of the means proposed, one of the chief is the establishment of a well-equipped laboratory or laboratories for research into various occupations, in order to determine the conditions necessary to get maximum output with minimum of fatigue and discomfort to the worker, such as elimination of unnecessary movements; and to study the causes of mental and muscular fatigue and the methods of reducing it. Tests would be made in the laboratory for the purpose of establishing standards by which workers can be selected for the occupations for which they are best suited, mentally and physically. These standards would enable parents and after-care committees to be advised as to the best vocations for children, and would thus eliminate much waste at the outset, and prevent the discontent which arises when a worker finds out too late that he has taken up an unsuitable occupation and is a square peg in a round hole. The facts established by research would be collected and classified, and from time to time published in such a form as to bring out their practical value. Another function of the institute would be to provide training courses and lectures for investigators, managers, foremen and welfare workers in the practical applications of psychology and physiology, and it would undertake investigations at factories and offices in relation to any special problem. It would study the conditions that tend to promote the health, comfort and welfare of the worker, and also the psychologic relations between employer, manager, foreman and worker, with special reference to securing harmony and cooperation. It would further undertake propaganda work among employers and employed, and cooperate actively with organizations of both, for the furtherance of national unity and prosperity.

### The Measurement of Emotion

At the Royal Society of Medicine, Prof. A. D. Waller, F.R.S., gave a very interesting lecture on the measurement of human emotion. He pointed out that emotion produced appreciable changes in the skin, such as vasomotor effects and sweating. He believed that there existed other phenomena under the control of the central nervous system. Cell metabolism was probably influenced directly by impulses arising in the central nervous system. Under certain influences the porous envelops surrounding every cell became more porous, and cell metabolism increased; under others, they became less porous, and cell metabolism diminished. These changes could be appreciated by the alterations produced in the resistance to the electric current. The hand of a subject was placed in the arm of a Wheatstone bridge and the resistance measured. A painful stimulus, physical or psychic, then caused a deflection of the mirror galvanometer. He thought that the alteration of

resistance was due to nervous impulses passing down the peripheral nerves and acting on the cells through their surrounding membranes. In the passive state, resistance varied in different individuals and at different times of the day. There was a definite daily cycle in resistance, which was highest during the early hours of the morning and lowest in the afternoon. These periods corresponded with the periods of minimum and maximum metabolism. For these observations the palms or soles should be used; with other surfaces of the body the reactions were less marked and were open to doubt. The reason for this was obscure. A practical demonstration was then given on an assistant and a volunteer from the audience. The striking of a match with the threat of burning caused an immediate deflection of the galvanometer. The actual burning caused a greater diminution. A deflection occurred when the subject coughed. This was due, not to any emotion associated with the cough, but to the passage of a nervous impulse down the nerves of the arm. There was an interval between the cough and the deflection of the galvanometer, which was attributed to changes at the periphery rather than in the highest centers. Contrary to expectation, hysterical subjects proved less likely to show deflection than normal persons.

### Leprosy as a Deficiency Disease

The fish hypothesis of leprosy was advocated with his characteristic persistency by Sir Jonathan Hutchinson throughout his long life. The incredulity with which it was received did not disturb him in the least. The greatest observer of his age, if indeed not of any age, he read the book of nature with infinite care and the insight of genius. Like all reformers, he had encountered incredulity and opposition in his greatest advances. If here they were more lasting, the only thing to do was to go on teaching. He maintained that leprosy was due to eating fish in a state of incipient decomposition. The cause was "some ingredient or parasite generated by or introduced into fish which had not been cured or cured badly." A study of the geographic distribution convinced him that neither climate nor race had anything to do with the disease. The observation that it prevailed almost exclusively on islands, on the shores of continents, and along the courses of rivers led to the conviction that it must in some way be due to the eating of fish. He accumulated an immense amount of evidence, such as the following: Leprosy is more prevalent among Roman Catholics than among those by whom fish is not eaten by reason of religious ordinance. The Jains and high-caste Brahmans of India, who are strict vegetarians, are almost free from leprosy. Leprosy did not affect the Hottentots until smoked fish was introduced among them. The number of lepers in the whole of India is five in 10,000, while in the fishing island of Minicoy it is 150 in 10,000. All over the world leprosy is a disease of the tribes that fish and not of those that hunt. Of these and kindred facts adduced by him and too numerous to mention, no other explanation than his has ever been given. But the discovery of the bacillus of leprosy by Hansen in 1874 caused a revival of the contagionist doctrine of leprosy, and it was assumed that a disease due to a specific bacillus could not be due to any article of food. And so the position has remained. But at the Royal Society of Medicine a paper has just been read by Mr. A. S. Dutton which tends to show that after all Hutchinson was right—as he always was—in the conclusion which he drew from the facts, though not in his pathologic speculation. He could not have arrived at the truth in this, for the conception of "deficiency diseases" did not then exist. Mr. Dutton referred to Hutchinson's observation that leprosy never developed in the United States except in parts of California, which he attributed to the fact that it was almost the only country where colonization took place without an initial stage of considerable hardship, and that a good variety of foods was practically always available. Mr. Dutton remarked that though leprosy was considered to be due to *B. leprae*, it was curious how closely the nervous symptoms of beriberi resembled those of lepra anaesthetica. Each was also prevalent in the far East. Lepra anaesthetica could occur without lepra tuberculosa and be present for a considerable time before the latter. This appeared to support the food theory. Mr. Dutton suggested that when the food supply was mainly fish, a deficiency in diet occurred. The salting of fish would produce a loss in its nutritive value. Leprosy might eventually be recognized as partly a deficiency disease, sometimes owing to a predisposition caused by a diet mainly of fish, and sometimes to a diet deficient in various necessary elements. If the bacillus then gained access to the body, the whole chain of tuberculous manifestations would be added.

## BELGIUM

April 3, 1920.

### Miners' Nystagmus

It is fairly well known with what great activity the industries of the Liége basin have combated occupational diseases in general. The hookworm dispensaries for miners obtained appreciable results, and in this preventive campaign, Professor Malvoz succeeded in eradicating a disease that had become a great menace. A rather curious disease observed in the mines, and against which serious measures are being taken, is miners' nystagmus. In reality, among all miners who work under bad lighting conditions, in metal mines as well as coal mines, visual fatigue is common. The fatigue may be limited to the photoreceptor structures of the eye (causing hemeralopia and defective retinal perception), but most often it passes this stage and attacks the centers that govern muscular equilibrium and the protective reflexes of the eye, causing nystagmus and blepharospasm. It results in visual disorders which become progressively worse, and which lead finally, especially among coal miners, to psychic disorders from exhaustion of the central nervous system (amblyopia, tics and neuroses). The latter eventuality is fortunately rare; ordinarily the troubles are limited to the visual apparatus. The manifestations are extremely variable in different subjects, and even in the same subject at different times. The clinical evolution of this fatigue depends on the physical condition of the individual person and on his physiologic resistance. There are periods of aggravation and remission. The symptoms are aggravated by enfeebling intercurrent diseases, such as pneumonia and typhoid fever. Workmen who are poorly nourished, weakened by overwork or privation, and those with domestic difficulties are easy prey for serious forms of the disease. Good physical condition, and proper rest and nourishment, on the contrary, act as deterrents to the development of the disease. Dr. Stassen has just published a statistical and experimental work on the subject. Of almost 20,000 miners examined by him, about 5,000, or 25 per cent., presented signs of varying degree of ocular fatigue. In the metal mines, only the benign and occasionally the moderately intense forms were found. In coal mines, however, all degrees of ocular fatigue were encountered. Of 1,000 coal miners, eighty had slight visual fatigue at the end of the day, 125 had some slight nystagmus, thirty had a marked diminution of vision with nystagmus, ten were partly incapacitated for work, and two had ocular neurosis and general nervous disorders which made them totally incapacitated for work. Dr. Stassen says that improved lighting of the mines is the first requisite in the prevention of visual disorders among miners. He cites cases of severe ocular fatigue which disappeared after the men

worked in pits with galleries lighted by incandescent electric lamps or in metal mines lighted by acetylene lamps. A successful campaign against miners' nystagmus requires the cooperation of the public authorities, mine owners and miners, a cooperation based on the same principles as the campaign against hookworm disease among miners in Liége province.

### Abdominal Hysterectomy

Dr. Frans Daels presented an interesting paper on the indications and technic of total abdominal hysterectomy before the Académie royale de médecine. He insists on hysterectomy in the treatment of cancer of the cervix. After a careful bacteriologic study of the parametrium, he has reached the conclusion that the streptococcus infection which exists in the carcinomatous area in 60 per cent. of the cases extends besides, six times out of ten, to the parametrium and to the lymphatic glands. The preliminary treatment before operation on patients with infection consists in curettage and cauterization of the base of the cancerous crater, followed by applications of radium for fifteen days. This preventive treatment permits better clearing away of the carcinomatous lesion and improves the general condition, but it does not inhibit the infection or prevent the infected tissues from coming in direct contact with the peritoneum, the ligatures and the suture lines. Therefore, the author wonders if it is not possible to disinfect these tissues, or, at the very least, to stop the extension of the infection. Clinical and laboratory experience justify him in recommending a solution of silver nitrate, 1 per cent. in a 0.5 per cent. solution of nitric acid, as having a direct bactericidal action and as stimulating proliferation. This topical treatment does not prevent Dr. Daels from considering careful peritonization of the true pelvis as the best preventive of extension of the autochthonous infection. In two of his cases the surfaces were successfully covered with large transplants from the peritoneum. After the hysterectomy is done, the walls of the vagina are fixed to a band formed by suturing the round ligaments together. This assures the organs of the true pelvis their normal plastic and static surroundings.

### Lethargic Encephalitis

Lethargic encephalitis has made its appearance in Belgium. In western Europe the disease first appeared at Verdun in 1915, and at Bar-le-Duc in 1916. It was first clearly recognized in Paris and London in March, 1918, and numerous papers have appeared on the subject in France and England. In the latter country, the government organized a scientific investigation; the report of this commission concludes that lethargic encephalitis is a clearly defined disease. The first paper on the subject in the Belgian medical press was that by Drs. Burger and Focquet. At a recent meeting of the Académie royale de médecine, Dr. Paul Masoin reported several cases of the disease, and recalled some cases which appeared in Flanders a year ago, especially at Ruddervoorde, where it assumed epidemic proportions. These cases were the subject of a report by Professor Van Ermengem to the Conseil supérieur d'hygiène in October, 1919. The disease was restricted to a few villages of Flanders for one year, but is now distributed over all provinces. For this reason, Dr. Masoin proposed that the academy recommend that the department of hygiene direct the attention of the medical profession to the disease and request all physicians to report suspected cases to health inspectors and to note any peculiarities which might help in studying the disease. Up to the present no attention has been paid to this appeal, except in one instance, the report by Drs. Lamalle and Leroy of the apparition of the disease in Liége. Their case was observed during a small epidemic of influenza.

## Deaths

**Cassius M. Witmer** ● Santa Ana, Calif.; Jefferson Medical College, 1881; aged 61; for thirty-five years a practitioner of Marble Hill, Mo.; formerly a member of the board of managers of the State Hospital, Farmington, Mo.; president of the Bollinger County Bank, Lutesville, Mo.; director of the Bank of Marble Hill, Mo., and of the South East Missouri Trust Company, Cape Girardeau, Mo.; vice president of the Telephone Company at Advance, Mo.; died, April 11, from cerebral hemorrhage.

**Bernard Bartow** ● Buffalo; University of Buffalo, 1874; aged 70; a member of the American Orthopedic Association and American Academy of Medicine; orthopedic surgeon to the Children's Hospital and consulting orthopedic surgeon to the Central and Municipal hospitals, Buffalo; emeritus professor of orthopedic surgery in his alma mater; died in the Children's Hospital, Buffalo, March 29.

**William Henderson Ruddick,** Boston; Harvard University Medical School, 1868; aged 75; a member of the Massachusetts Medical Society; assistant surgeon of the Seventh Massachusetts Infantry during the Civil War; also a veteran of the war with Spain; formerly assistant superintendent of the New Hampshire State Hospital, Concord; died, April 8.

**Buford Nelson Dunavant** ● Memphis, Tenn.; Memphis (Tenn.) Hospital Medical College, 1906; aged 37; major, M. C., U. S. Army, and attached to the 115th Field Artillery; formerly major, M. C., N. G., Tenn., and assigned First Infantry; was shot and fatally wounded by policemen summoned to quiet a disturbance at his residence, April 11.

**Peter Winslar Franklin Corning,** Londonderry, N. H.; Baltimore Medical College, 1906; aged 47; a member of the New Hampshire Medical Society; while driving in his automobile over a grade crossing south of Londonderry, April 12, was struck by a train, and died while being taken to the Lawrence (Mass.) General Hospital.

**Seth Wicks** ● Chicago; University of Illinois, Chicago, 1903; aged 40; captain, M. R. C., U. S. Army, with service at Camp Custer, Mich., and discharged Jan. 29, 1919; instructor in biology in his alma mater; died in Lake View Hospital, Chicago, April 24, after an operation for appendicitis.

**Edward Joseph Connell** ● New York City; Cornell University Medical College, New York City, 1899; aged 43; assistant otologist to the Lincoln Hospital, and assistant ophthalmologist and aural surgeon at the Fordham University Dispensary, New York City; died, April 11, from pneumonia.

**Henry Sherman Kilby,** North Attleboro, Mass.; Harvard University Medical School, 1878; aged 68; a member of the Massachusetts Medical Society; for many years school physician and a member of the school committee of North Attleboro; died, April 10.

**Mead Charles Carpenter** ● Linesville, Pa.; Western Pennsylvania Medical College, Pittsburgh, 1895; aged 55; while driving in his automobile over a grade crossing of the Pennsylvania system at Linesville, April 9, was struck by a train and instantly killed.

**Kire Le Clare Clock,** Ravenwood, Colo.; Barnes Medical College, St. Louis, 1899; aged 56; physician of the Victor-American Mine; died, April 22, from the effects of poison, self-administered, it is believed, with suicidal intent.

**Isaac Irwin Kalbach,** Glen Riddle, Pa.; Jefferson Medical College, 1893; aged 48; a member of the Medical Society of the State of Pennsylvania; died in the Taylor Hospital, Ridley Park, Pa., April 16, from cerebral hemorrhage.

**Robert Lee Taylor,** Cleveland, Tenn.; University of Nashville, Tenn., 1897; aged 50; died in his office, April 7, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent, while despondent.

**Walter Ross,** The Pas, Manit.; Manitoba Medical College, Winnipeg, 1909; aged 33; Major, Canadian A. M. C. and D. A. D M. S.; died in the Canadian Hospital, Buxton, England, February 6, from pneumonia.

**Martin Friedrich** ● Cleveland; Western Reserve University, Cleveland, 1894; aged 63; chief of the Bureau of Communicable Diseases of Cleveland; for many years health officer of the city; died, April 8.

**Henry Oliver Conoway,** Grand Island, Neb.; Eclectic Medical Institute, Cincinnati, 1875; aged 71; formerly of Phillips, Neb.; died in the Grand Island General Hospital, April 1, from cerebral hemorrhage.

● Indicates "Fellow" of the American Medical Association.

**Earl E. Craig,** Wilson, Ark.; University of Tennessee, Nashville, 1907; aged 41; a member of the Arkansas Medical Society; was killed by the overturning of his automobile in Wilson, March 30.

**Arthur O. Sax** ● Chicago; Hahnemann Medical College, Chicago, 1897; aged 52; professor of theory and practice of medicine in his alma mater; died, April 23, from valvular heart disease.

**Charles Ernest Walters,** Dexter, Mo.; Barnes Medical College, St. Louis, 1907; aged 41; captain, M. C., U. S. Army; a member of the Missouri State Medical Association; died, March 26.

**Percy Bissell Grant,** Roblin, Manit.; Manitoba Medical College, Winnipeg, 1908; aged 39; died in the Winnipeg General Hospital, January 5, from appendicitis.

**John Trumbull,** Vina del Mar, Chile, S. A.; Harvard University Medical School, 1880; aged 64; died in Valparaiso, Chile, February 26, from chronic endocarditis.

**Iverson L. Lofton,** Nashville, Tenn.; University of Nashville, Tenn., 1860; aged 79; a Confederate veteran; died, March 20, from cerebral hemorrhage.

**Victor H. Parker,** Carmi, Ill.; Jefferson Medical College, 1876; aged 67; died in a hospital in Jacksonville, Fla., April 6, from cardiorenal disease.

**Joseph Johnston Shanks,** Salem, Va.; University of the City of New York, 1882; aged 63; died at McAlpin, W. Va., March 31, from pneumonia.

**John J. Theorell,** Porter, Ind.; Hahnemann Medical College, Chicago, 1898; aged 71; died, February 20, from chronic interstitial nephritis.

**Thomas John Nolson Gatrell,** Santa Ana, Calif.; Rush Medical College, 1900; formerly of Oberlin, Ohio; died, February 12.

**Valentine Bowers,** Frankfort, Ind.; Central College of Physicians and Surgeons, Indianapolis, 1880; aged 77; died, March 4.

**Julius Jerome Goldstein,** New York City; University and Bellevue Hospital Medical College, 1909; aged 33; died, April 14.

**William James Weeks,** Ottawa, Ont.; Queen's University, Kingston, Ont., 1865; aged 80; died, February 22, from heart disease.

**A. Thomas Buchanan,** Chicago; St. Louis Medical College, 1872; aged 78; a veteran of the Civil War; died, April 22.

**Reuben T. Gillin,** Burnett's Creek, Ind.; Fort Wayne (Ind.) College of Medicine, 1892; aged 75; died, March 3.

**H. Burton Kirkland,** Bryan, Ohio; Eclectic Medical Institute, Cincinnati, 1891; aged 52; died, April 21.

**Franz G. Koehler,** Philadelphia; aged 92; a practitioner since 1849; died, March 8, from pleurisy.

**James Case Brixey,** Chicago; College of Physicians and Surgeons, Chicago, 1905; died, April 22.

**Robert Reid Wilkinson,** Texas; University of Nashville, Tenn., 1884; aged [illegible]; died recently.

**Simon D. Horsocker,** Silverville, Ind. (license, Indiana, 1897); aged 87; died, March 16.

## Marriages

CHAUNCEY DEWITT BEEBE, Sparta, Wis., to Miss Marguerite Dreneen Bittner of New York City, at Chicago, April 3.

HAROLD KOCH SHAWAN, Detroit, to Miss Jane Coleman, at Chicago, April 19.

CHARLES ALLEN MCWILLIAMS to Miss Nona Harry, both of Gulfport, Miss., April 8.

WARREN ASHLEY COLEMAN to Miss Christine Edwards, both of Eastman, Ga., May 1.

JAMES HOWARD HUDDLESON, JR., to Miss Mary Ellen Pascoe, both of New York City, February 17.

JOSEPH G. WILSON to Miss Anne Dunning, both of New York City, April 19.

HENRY WILLIAM ABELMANN to Miss Anabel Borg, both of Chicago, April 17.

FREDERICK HOLTON MORRISON, Newton, N. J., to Miss Mary C. Shaw of Stanhope, N. J., March 24.

# The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

## SOME MISBRANDED DRUG PRODUCTS AND NOSTRUMS

**Quinin Sulphate and Calomel Tablets.**—The Drug Products Company, New York City, shipped in September, 1917, quantities of "Quinin Sulphate Tablets" and "Calomel Tablets" which were adulterated and misbranded. The tablets of quinin sulphate were labeled as 2 grain tablets. Analysis by the Bureau of Chemistry showed that they actually contained only about 1½ grains (1.54 gr.) of quinin sulphate to each tablet. The calomel tablets were labeled as ¼ grain, while the Bureau of Chemistry's analysis showed that they actually contained less than ⅛ grain (0.156 gr.) calomel to each tablet. In December, 1918, the company pleaded guilty and was fined $20.—[*Notice of Judgment No. 6636; issued March 22, 1920.*]

**Some Miscellaneous Tablets.**—The Carroll Dunham Smith Pharmacal Co. of New York City shipped in September, 1917, a number of tablets which were declared adulterated and misbranded. Some "Acetanilid Tablets" which were labeled as 5 grains were found to contain only 2.98 grains, or a shortage of 40 per cent. Some "Nitroglycerin Tablets" which were labeled as 1/50 grain were found to contain only 0.0139 grain, or a shortage of 30 per cent. Some "Acetylsalicylic Tablets" labeled as 5 grains were found to contain only 4¼ grains, or a shortage of 15 per cent. Some "Acetphenetidin and Salol Tablets" labeled as containing 2½ grains each of acetphenetidin and salol were found to contain only 0.37 grains acetphenetidin and 1.45 grains of salol per tablet, being a shortage of 85 per cent. and 42 per cent., respectively. Some "Quinin Sulphate Tablets" which were labeled 2 grains were found to contain approximately 1.3 grains, or a shortage of 33 per cent. In December, 1918, the company pleaded guilty and was fined $25.—[*Notice of Judgment No. 6682; issued March 29, 1920.*]

**Hostelley's Hypophosphites.**—William H. Hostelley, who traded as W. H. Hostelley & Co., Philadelphia, shipped in November, 1917, some "Hostelley's Hypophosphites (Syr. Hypophos. Comp.)" and also "Hostelley's Chemically Pure Hypophosphites (Sol. Hypophos. Comp.)" which were adulterated and misbranded. These products were adulterated because when analyzed by the Bureau of Chemistry they were found to vary widely both from their declared composition and also from the National Formulary requirements. The "Syr. Hypophos. Comp." was also declared misbranded because it was falsely and fraudulently represented as a cure for tuberculous manifestations, neurasthenia, rickets, anemia, bronchial affections, nervous insomnia and senile depression "when in truth and in fact it was not." The "Sol. Hypophos. Comp." was also declared misbranded because it was falsely and fraudulently represented as a cure for tuberculous manifestations, alcoholic or sexual neurasthenia, all nervous and mental diseases, physical depression, senile decay and anemia when it was not. In February, 1919, Hostelley pleaded guilty and was fined $100 and costs.—[*Notice of Judgment No. 6747; issued April 9, 1920.*]

**Stoddard's Pinus-Codeia and Miscellaneous Tablets.**—G. S. Stoddard & Co., New York City, in November, 1917, shipped "Stoddard's Pinus-Codeia" and various tablets which were misbranded. The "Pinus-Codeia" was misbranded in that it failed to bear a statement of the quantity or proportion of codeia contained in each fluidounce of the article and it also failed to state that codeia is a derivative of opium. Some "Salcetol-Codeia Tablets" were misbranded in that

while they contained acetanilid, the amount of this drug was not declared on the label; neither did the label carry the information that codein sulphate is a derivative of opium. "Salcetol Phenylamine Ammonii Salicylate Tablets" was falsely and misleadingly labeled in that it was represented that the tablets contained ammonium salicylate when they did not and for the further reason that while the tablets did contain acetanilid the quantity or proportion of acetanilid was not declared. "Salcetol Co. No. 2 Infant Corrective" was sold under the claim that it contained bismuth subnitrate, zinc sulphocarbolate and phenylacetamide when as a matter of fact it contained none of them. It was further misbranded in that the label declared that it contained 1/30 of a grain calomel and no sugar when, as a matter of fact, it contained more than 1/30 of a grain of calomel and did contain sugar. "Cannabin Co. Tablets" were labeled as containing 1/10 gr. strychnin phosphid and 1/100 gr. brucin to each tablet; as a matter of fact they contained only about 1/77 gr. of strychnin phosphid and no brucin. In February, 1919, the company pleaded guilty and was fined $70.—[*Notice of Judgment No. 6714; issued April 9, 1920.*]

**Dr. King's Star Crown Brand Pills.**—The Northern Drug Co., Duluth, Minn., shipped a quantity of this stuff in August, 1917. The federal chemists reported that these pills consisted essentially of aloes and oil of pennyroyal and were coated with chalk, charcoal and sugar. The preparation was falsely and fraudulently represented as a cure for delayed and painful menstruation and menstrual irregularities, when it was not. In November, 1918, the company pleaded guilty and was fined $5.—[*Notice of Judgment No. 6713; issued April 9, 1920.*]

**Marshall's Pain Drops and Other Nostrums.**—Irving J. Carter, who did business as the M. W. Marshall Medicine Co., Redgranite, Wis., shipped in August, 1917, a number of nostrums which were misbranded. The Bureau of Chemistry analyzed these and reported on them as follows:

*"Marshall's Unequaled Pain Drops."*—This was found to consist essentially of red pepper, opium, ammonia, alcohol and water with rosemary flavoring. The nostrum was falsely and fraudulently represented as a cure for rheumatism, neuralgia, cholera morbus, all bowel complaints, sore throat, spinal disease, diphtheria in its most malignant form, liver and kidney complaints and various other conditions. It also was said to "contain no poisonous . . . matter" when it actually contained 2 grains of opium to the ounce.

*"Marshall's Lung Syrup."*—This "syrup" was found to consist essentially of morphin sulphate, ammonium chlorid, vegetable extractives, glycerin, syrup and flavoring material. It was falsely and fraudulently represented as a cure for consumption, asthma, whooping cough, pleurisy, croup, etc.

*"Dr. J. C. Brown's Unequaled Liquid Drops."*—The "drops" were found to consist essentially of red pepper, ginger, oil of sassafras, camphor, ammonia, trace of morphin, alcohol and water. They were falsely and fraudulently represented as a cure for sick and nervous headache, rheumatism, all bowel complaints, spinal diseases, diphtheria, etc., and were also labeled as containing no poisonous matter when in fact they contained 2 grains of opium to the ounce.

*"Marshall's Blood and Liver Pills."*—These pills were found to consist essentially of aloes and other plant material, chalk, sugar and starch. They were falsely and fraudulently represented as a cure for inflammation of the liver, stoppage of the menses, "irritable vindictive feelings and passions," kidney disease, nervousness, fevers, dyspepsia, etc.

*"Egyptian Oil."*—This was found to consist essentially of linseed oil with volatile oils, including sassafras and cedar oils and camphor. It was falsely and fraudulently represented as a cure for piles, diphtheria, coughs, colds, earache and erysipelas.

*"Arctic Oil Liniment."*—This liniment consisted, essentially, of a liquid in two layers. The upper layer contained kerosene, linseed oil, castor oil and camphor; the lower contained alcohol, ammonia, water, plant extract and a trace of iodin. It was falsely and fraudulently represented as a cure for diphtheria, rheumatism, catarrh, all kinds of lameness, etc.

*"Rheumatic Oil."*—This also separated into two layers. The upper layer was found to consist essentially of kerosene, linseed oil, castor oil and camphor; the lower to contain alcohol, ammonia, water, plant extract and a trace of iodin. It was falsely and fraudulently represented as a cure for rheumatism, neuralgia, colic, nervous headache, diphtheria, spinal and hip complaints, colic and distemper in horses, etc.

In June, 1919, Irving J. Carter pleaded guilty and was fined $50.—[*Notice of Judgment No. 6748; issued April 9, 1920.*]

## Correspondence

### THE USE OF DRUGS IN OIL

*To the Editor:*—During the last winter I have been carrying on investigations in the use of drugs in oil, subcutaneously, intramuscularly and intravenously. Although the work has by no means reached a definite form to warrant publication as a completed investigation, I am, nevertheless, prompted to communicate the present results in this preliminary way, because it would be well for other hands to repeat whatever results may have been reached thus far.

In brief, it has been found that the local action of drugs, notably epinephrin, and local anesthetics, such as procain, exhibit a strikingly prolonged drug effect when the drug is administered subcutaneously and in an oil vehicle. It has been possible, therefore, to use epinephrin in oil for such clinical conditions as bronchial asthma, certain urticarial eruptions and in certain types of pneumonia, the method being to establish a local subcutaneous depot of epinephrin in oil, and to procure rather continuous epinephrization effects by repeating the subcutaneous inoculation every eight to twelve hours. With the collaboration of Dr. Theodore Blum it was possible to produce local anesthesia without apparent ill or toxic effect, for a duration of from ten to twelve hours, using the local anesthetic (procain) in oil.

Intravenously, it has been possible to give as much as 10 c.c. of olive oil at one time to a dog and to repeat this dose every third or fourth day, until as much as 100 c.c. has been administered. In rabbits the danger of fatal embolization from the intravenous use of oil is very great, while in dogs this is not so. In man, oil was administered intravenously in doses of 0.25 to 1.5 c.c. in a very small group of cases with no apparent signs or symptoms of embolization.

The intravenous effect of giving a drug in oil, in general, is to produce a gradual, uniform, even and prolonged effect, of a less intensity as compared with the administration of the same drug in aqueous solution, in which the effect would be abrupt, irregular, erratic, rather transient, and of striking intensity. Also, it has been demonstrated that increasing amounts of oil, when added to a definite and constant amount of drug, will diminish the intravenous effect of the drug until no intravenous effect is observed when sufficient oil is used. In other words, within limitations, the less oil used for a definite amount of drug, the more marked the intravenous effect. We have worked mainly with epinephrin, crystalline strophanthin, and to a lesser degree, with nitroglycerin and pituitary extract.

The drug with oil is embolized in the pulmonary capillary bed. We infer that the different pharmacologic action noted from the intravenous use of epinephrin in oil, for instance, as compared with the effect of the same drug in aqueous solution, is probably due to the fact that the drug in oil is carried to the pulmonary capillary bed and there enmeshed to form a local depot.

H. R. MILLER, M.D., New York

## THE MENACE OF THE HOMICIDAL DEFECTIVE

*To the Editor:*—The lamentable assassination of our distinguished colleague, Dr. James W. Markoe, once more shows us the nonsense of our present insanity laws. I enclose a circular which the Brooklyn Neurological Society is sending to every hospital staff and every county society in New York, asking their cooperation in a fight for rational laws dealing with not only our mentally ill patients, but in criminal cases as well.

The agitation for a correction of our present defective insanity laws and procedure should be nation wide.

JOHN F. W. MEAGHER, M.D., Brooklyn.

The circular reads:

For years this society has advocated a readjustment of our insanity laws, not only for the welfare of our patients, but for the protection of society. Insanity, as it is usually termed, is a medical and not a legal problem. As the laws now stand, a judge or a jury has the deciding opinion as to whether a man is sane or insane; safe to be at large, or unsafe; and neither by education nor by training is either competent to decide. Most judges, having sound common sense, realize this and prefer to abide by the opinions of psychiatrists. There are a few who do not. Some of the most dangerous types of insanity—particularly paranoid conditions without deterioration—are the most difficult ones to diagnose.

Not infrequently such cases are merely asked in court whether they are insane, and on replying in the negative, are discharged forthwith! And a potential homicidal patient is thrown back on to society! We as physicians are helpless, for in this branch of medicine—psychiatry—a judge or jury are by our present laws clothed with superior diagnostic powers!

The Medical Society of the County of Kings, with a membership of one thousand physicians, indorsed our attitude, and in February so notified the governor. But unless all physicians, individually and collectively, will interest themselves in this subject, and interest both the press and the public, our efforts will not bear fruit. Instead, the present laws and the present procedure will remain as they are to the detriment of our patients, and a danger to society.

Will you not send resolutions to the governor, and to the members of the legislature, asking for an investigation into our insanity laws?

For let it be reiterated again, that insanity is a mental disorder—a medical problem—rather than a legal one. Personally, I know that most members of the bar agree to this. There should be no division of authority.

JOHN F. W. MEAGHER.
President, Brooklyn Neurological Society.

## "OXYGEN INFLATION OF THE PERITONEAL CAVITY"

*To the Editor:*—With reference to the experience described by Dr. Armitage Whitman (THE JOURNAL, April 10, 1920, p. 1021) we would say that it is ill advised for any patient who has had the peritoneal cavity inflated with oxygen to assume the erect posture for at least twenty-four to thirty-six hours after the roentgen examination. For any one to submit to inflation and then maintain an erect posture, attempting to carry on his business and walking to and from his office to the hospital, would be, to say the least, extremely dangerous. In our attempt to render inflation an office procedure we have of late deflated our patients, in which case they are almost immediately relieved and may assume the erect posture much earlier. Deflation, with a few hours' rest in the recumbent posture, would have given Dr. Whitman the much sought for relief.

WILLIAM H. STEWART, M.D., ARTHUR STEIN, M.D.,
New York.

## "TUBING AS A CAUSE OF REACTION TO INTRAVENOUS INJECTION, ESPECIALLY OF ARSPHENAMIN"

*To the Editor:*—In THE JOURNAL, April 10, 1920, appeared an article under this title from the pen of Stokes and Busman, in which the attention of the profession is called to reactions due to new rubber tubing. Permit me to state that I can fully corroborate their views, not on experimental grounds such as is furnished by the authors, but from a purely practical experience. A number of years ago, at least four or five, we were struck out of a clear sky by a number of reactions of the nature so vividly pictured by Stokes and Busman, most of them accompanied by herpetic eruptions. This happened in my service at Mount Sinai Hospital, and caused the closest scrutiny into technical errors, toxicity of drug, and the so-called "Wasserfehler," in which I was assisted by Dr. S. Bookman, physiologic chemist of the pathologic department of the hospital. All other causes having been excluded, I came to the conclusion that the reactions were due to new rubber tubing, a suspicion which was fortified by a subsequent analogous experience.

Since that time it has been the standard rule at Mount Sinai Hospital not to use new rubber tubing for intravenous injections until after it has been boiled in soda solution on three successive days for one hour each day.

We believe that by this procedure we have eliminated the so-called tubing reactions.

HERMANN GOLDENBERG, M.D., New York.

## THE MEANING OF NONA AS APPLIED TO LETHARGY

*To the Editor:*—In Flexner's recent article on lethargic encephalitis (THE JOURNAL, March 27, 1920, p. 865) there is a reference to the obscurity of the term "nona," applied to this disease in southern Europe, and a philological surmise that it is really a mispronunciation of "coma." This seems to me a bit far fetched. I think there is a clearer etymological explanation. About thirty years ago, in 1890 when the African sleeping sickness was first called to the attention of students of tropical medicine, there was an epidemic of lethargy among the silkworms in southern France and northern Italy. At Strasbourg, where I was studying, this was spoken of as Schlaffsucht (Schlafsucht?) der Seidenraupen, or lethargy of silkworm caterpillars. In Italian, this form of the worm is called "nona," in French, "nonne." There was a great deal of discussion as to a possible common cause of this condition, "malattie de la nona," and human sleeping sickness, and some confusion in the application of the term. It seems quite reasonable to surmise that malattie de la nona, or "nona" for short, at first correctly applied to the lethargy of the silkworm, was finally made to include human lethargy as well. This explanation is offered to Professor Flexner for what it may be worth.

PERCY FRIDENBERG, M.D., New York.

## FACTS LEADING TO PUBLICATION OF "ARMY FROWNS AND SMILES"

*To the Editor:*—Will you please be equally as fair to me and publish this reply in your next issue, as you were in publishing the article written by Surgeon-General Merritte W. Ireland in a recent issue regarding my book?

It is unnecessary to enter into a lengthly discussion of the issues involved; suffice it to say, everybody will agree that it is most unusual for a sane man near 34 years old to make such bold statements as I do in my book and then not only sign them but also add to his signature a "sworn affidavit that they were true," unless he knew whereof he spoke.

There are two clear, outstanding reasons why I was not allowed to testify in my own behalf, not even reprimanded for "making false statements," given an honorable discharge from the army two months after having been branded as a liar, and then refused a thorough investigation by the leading government officials of the United States: First, because they are the biggest bunch of back-boneless, pussy-footed white-washers that ever held power in any nation, so far as I know, so help me God. Second, because they knew full

well that I could prove the statements made in my book. Therefore my appeals for justice have been ignored or refused.

DOLPHUS E. COMPERE, M.D., Dallas, Texas.

[NOTE.—Possibly we ought to apologize for printing this communication; we publish it that we may be considered "equally as fair."—ED.]

### COMPULSORY VACCINATION

*To the Editor:*—Compulsory vaccination is repugnant to the popular conception of our institutions. A small minority of our people object to it on business, religious or moral grounds, and a rather extensive minority heedlessly neglect it, so that I suppose today a third of our population is unvaccinated. It is doubtful, even if the courts sustained a compulsory vaccination law, whether it could be enforced with any useful degree of efficiency. Under such circumstances, nothing but the compulsion of fear will drive these recalcitrant ones to seek protection against this dread affection; for, so long as the state takes on itself to protect them by isolation and quarantine of the infected ones, so long will this efficient safeguard be neglected. And my suggestion is that they be driven by personal fear to seek this protection voluntarily. To that end I would repeal all law aimed at smallpox, and leave its victims free to mix indiscriminately with society; but I would provide by law for free vaccination to all comers.

WILLIAM B. ELY, M.D., Ainsworth, Neb.

### "MEDICINE A HUNDRED YEARS AGO"

*To the Editor:*—In the abstract of Deelman and Delprat's paper (THE JOURNAL, April 17, 1920, p. 1138), the allusion to operations by Dupuytren and Larrey for kidney stone should read *bladder* stone. The first attempt even for renal calculus by Durham (London )was not made until 1870, and the first success was by Ingalls (Boston), Nov. 8, 1873.

J. RAWSON PENNINGTON, M.D., Chicago.

## Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### DEFINITION OF ANOCI-ASSOCIATION, METABOLISM, HORMONES AND VITAMINS—EPINEPHRN TEST OF GOETSCH

*To the Editor:*—I shall be obliged to you for information on the following:

1. What is anoci-association; its philological derivation; different forms, applications, etc.?
2. A good definition of metabolism; the different kinds — "basal metabolism," etc.; philological roots; scientific applications, etc.
3. What are hormones; philological derivation; classification, names of those known; practical application?
4. What are vitamins; derivation of this word; classification, application, known kinds, etc.?
5. What is the epinephrin test of Goetsch; technic and clinical applications?

A. I., Ciudad del Carmen, Camp. Mexico.

ANSWER.—1. "Anoci-association" is coined from *a* (Latin privative particle) + *noci* (Latin *nocere*, to injure) + association (Latin *associatio*). Noci-association is the unconscious discharge of nervous energy under the stimulus of trauma, especially in surgical shock. The term anoci-association was introduced by Dr. G. W. Crile to characterize his method of so conducting the anesthesia and managing the operation that this injurious nervous discharge is prevented and counteracted. The procedure contemplates isolating the operative field from the brain by blocking the conduction of harmful sensory and traumatic impulses through the use of a proper local anesthetic. The patient is gently managed before operation, and if no contraindication exists, a preliminary injection of morphin or morphin and scopolamin is made. When the patient is under the influence of the anesthetic (Dr. Crile prefers nitrous oxid anesthesia), the field of operation is blocked by infiltration with procain (novocain), 1:4,000. The operation is conducted with gentleness, so as to avoid any unnecessary trauma. At the close of the operation a local injection of quinin and urea hydrochlorid avoids nerve exhaustion from after-pain and postoperative stimulation.

2. The term "metabolism" is derived from the Greek (μεταβολή, change). It is the act or process by which, on the one hand, the stable nonliving food is built up into complex and unstable living material, and by which, on the other hand, the living matter in protoplasm is broken down into less complex and more stable substances within a cell or organism. Metabolism has been divided into constructive metabolism (anabolism) and destructive metabolism (catabolism). The former comprises the processes by which food substances are converted into protoplasm, while catabolism is the means by which protoplasm breaks down into simpler products as waste or excretory products. In a broad sense, metabolism includes all processes involved in the maintenance of animal life. Basal metabolism is a measure of the energy metabolism of a normal fasting person at rest. It is determined by ascertaining the heat production or gaseous interchange, and is expressed in calories per kilogram of body weight.

3. The term "hormone" was introduced by Prof. E. H. Starling to characterize a group of chemical substances which, formed in one organ, are carried by the blood stream to an associated organ and there excite a specific functional activity. The word is coined from the Greek (ὁρμάω, arouse or excite). The active principles of internal secretions are hormones. Those which have been described are secretin (gastric hormone), hormones of the liver, pancreas, kidney, testis, ovary and corpus luteum, epinephrin and the active substances of the thyroid apparatus, the thymus gland and the pituitary body. The rational treatment of diseases of the ductless glands by organotherapy is based on recognition of the physiologic activities of the hormones.

4. Vitamins (from *vita*, life, and *amin*) are a class of substances of unknown chemical composition, believed to be necessary to normal nutrition and growth, and absence of which from the diet, it is stated, produces certain deficiency diseases, such as beriberi, scurvy and rickets.

5. The test referred to is that called "skin reaction of Goetsch." Eight minims of a 1:1,000 solution of epinephrin are diluted with an equal quantity of sterile water and injected hypodermically into the arm. Immediately there is formed an area of blanching around the point of injection, and about the margin of this usually a red areola gradually shading off into the surrounding tissue. In about half an hour the center of the white area becomes bluish gray to lavender, and at the end of about one and a half to two hours the red areola takes on the bluish or lavender color, while that in the center disappears. This lavender areola remains for about four hours from the time of injection and is the most characteristic part of the test. Accompanying the local reaction may be increase in pulse rate, with palpitation of the heart and an exaggeration of the tremor and nervous symptoms in general. The test is designed to elicit evidence of hyperthyroidism.

### MARINESCO AND OGILVIE METHODS OF INTRASPINAL THERAPY

*To the Editor:*—Please describe the Marinesco and the Ogilvie technics for intraspinal therapy with neo-arsphenamin and arsphenamin. Please omit name in published answer.

W. S. R., Charleston, W. Va.

ANSWER.—The method of Marinesco, which Minea assisted in elaborating, was first published in the *Zeitschrift für physikalische und diätetische Therapie* (17:194, 1913) and soon after in the *Bulletin de l'Académie de médecine* (71:259, 1914). It consisted in the addition of from 6 to 12 mg. of neo-arsphenamin to 2 c.c. of the blood serum of the patient, after this had been inactivated. The mixture was placed on the water bath at 37 C. for forty-five minutes, and was then injected into the subarachnoid space. An injection was made every seven or eight days for as long as seemed indicated.

Ogilvie's method was first described in THE JOURNAL, Nov. 28, 1914, p. 1936. The technic employed is as follows:

About 50 c.c. of blood are drawn into a centrifuge bottle by means of a McRae vacuum needle. The bottle is immediately placed in a large centrifuge and the fibrin and cellular elements are thrown down. It requires a speed of about 3,000 revolutions for fifteen minutes to produce a perfectly clear serum. It is rarely necessary to centrifuge more than once if the blood is freshly drawn, but the process should be repeated if the serum is not absolutely free from cells and fibrin. To 15 c.c. of serum is then added the amount of arsphenamin to be given. This is done by mixing the arsphenamin as for an intravenous treatment, using freshly distilled and boiled water, and bringing the total quantity up so that each 40 c.c. of the solution will contain 1.0 dg. (0.1 gm.) of the drug. Each cubic centimeter of this solution will then contain 2.5 mg. of arsphenamin. With a 1 c.c. pipet, graduated into tenths, the desired amount can be readily measured from 0.25 mg. upward. In adding the sodium hydroxid it is of the greatest importance to use only the exact amount required to alkalize the solution very faintly. When this has once been determined by testing with litmus paper, the sodium hydroxid should always be added quickly, and not drop by drop. It is also very important that the temperature of the arsphenamin and serum be the same when the two are mixed. The serum is then gently agitated to mix the two thoroughly, and is placed in a thermostat at 37 C. for forty-five minutes. From this it is placed in a thermostat at 56 C. for thirty minutes. It is now ready to be given intraspinally, and it should be used as soon after preparation as possible. Under no circumstances should a serum be used that is more than three hours old.

## BENEDICT'S BASAL METABOLISM DETERMINATION

*To the Editor:*—What is the Benedict method of basal metabolism determination as referred to by Dr. G. W. McCaskey in the opening sentence of his article in THE JOURNAL, April 3, 1920, p. 927?

FRED B. MORGAN, M.D., Clinton, Iowa.

ANSWER.—This method is based on the determination of the respiratory exchange by means of a calorimeter, this exchange being accepted as an index of alterations both in the character and in the amount of the basal metabolism, showing oxygen intake and carbon dioxid output. The method, which is complicated and can be performed only in a properly appointed laboratory, is described fully by Benedict in a number of articles. The more important of these are:

*J. Biol. Chem.* **20**: 263, 1915; *Boston M. & S. J.* **174**: 857 (June 15); 898 (June 22); 939 (June 29) 1916; **178**: 667 (May 16) 1918; **181**: 107 (July 31); 415 (Oct. 2) 1919; *Am. J. Physiol.* **41**: 275, 292 (Sept.) 1916.

See also:

Peabody, Meyer and Du Bois: *Arch. Int. Med.* **17**: 980 (June) 1916.
Means: *Boston M. & S. J.* **174**: 864 (June 15) 1916.
Gephart and Du Bois: *Arch. Int. Med.* **17**: 902 (June) 1916.
Moulton: *J. Biol. Chem.* **24**: 299 (March) 1916.
Aub, Du Bois and Soderstrom: *Arch. Int. Med.* **19**: 823, 840 (May) 1917.
Peabody, Wentworth and Barker: *Arch. Int. Med.* **20**: 468 (Sept.) 1917.
Bowen, B. D., and Boothby, W. M.: *J. Urol.* **1**: 469 (Oct.) 1917.
Abbott, M. E.: *Canadian M. Assn. J.* **8**: 491 (June) 1918.
Du Bois, Eugene F.: *M. Clin. N. Am.* **2**: 1201 (Jan.) 1919.
Gardner and Peppard: *Journal-Lancet* **39**: 495 (Sept. 15) 1919.
McCaskey: *New York M. J.* **110**: 607 (Oct. 11) 1919.

## URTICARIA FOLLOWING USE OF PROCAIN

*To the Editor:*—Has the use of procain ever produced severe urticaria, even running to very pronounced angioneurotic edema?

H. C. ABEY, M.D., Excelsior, Minn.

ANSWER.—Many cases are recorded in which drugs have caused urticaria, but procain is not on the list. Drug urticaria is presumably an anaphylactic reaction. It has followed administration of all sorts of drugs, when taken by mouth or when injected subcutaneously or intradermally. Angioneurotic edema, which is really a giant urticaria, has also been caused by drugs.

# *Medical Education, Registration and Hospital Service*

## COMING EXAMINATIONS

ARKANSAS: Little Rock, May 11-12. Sec. Regular Bd., Dr. I. J. Stout, Brinkley. Sec. Eclectic Bd., Dr. C. E. Laws, Fort Smith.
FLORIDA: Jacksonville, June 14-15. Sec., Dr. Wm. M. Rowlett, Citizens Bank Bldg., Tampa.
GEORGIA: Atlanta, June 9-11. Sec., Dr. C. T. Nolan, Marietta.
HAWAII: Honolulu, May 10-14. Sec., Dr. R. W. Benz, 1141 Alaken St., Honolulu.
KENTUCKY: Louisville, May 17. Sec., Dr. A. F. McCormack, 532 W. Main St., Louisville.
LOUISIANA: New Orleans, June 10-12. Sec., Dr. E. W. Mahler, 141 Elk Place, New Orleans.
MASSACHUSETTS: Boston, May 11-13. Sec., Dr. Walter P. Bower, Room 144, State House, Boston.
MICHIGAN: Ann Arbor, June 8-10. Sec., Dr. B. D. Harrison, 504 Washington Arcade, Detroit.
MINNESOTA: Minneapolis, June 1-4. Sec., Dr. Thos. McDavitt, 539 Lowry Bldg., St. Paul.
MISSOURI: St. Louis, June 14-16. Sec., Dr. Geo. H. Jones, State House, Jefferson City.
NATIONAL BOARD OF MEDICAL EXAMINERS: Philadelphia, May 19-26. Sec., Dr. J. S. Rodman, 1310 Medical Arts Bldg., Philadelphia.
NEBRASKA: Lincoln, June 9-11. Sec., Department of Public Welfare, Mr. H. B. Antles, Lincoln.
NEW YORK: New York, Albany, Syracuse, Buffalo, May 18-21. Assistant, professional examinations, Mr. Herbert J. Hamilton, Education Bldg., Albany.
OHIO: Columbus, June 8-11. Sec., Dr. H. M. Platter, State House, Columbus.
TENNESSEE: Memphis, Nashville and Knoxville, June 11-12. Sec., Dr. A. B. DeLoach, 1001 Exchange Bldg., Memphis.
WYOMING: Cheyenne, June 7-9. Sec., Dr. J. D. Shingle, Cheyenne.

## A SMALL COMMUNITY HOSPITAL

EDWARD F. STEVENS, A.I.A.
BOSTON

Small communities at a distance from the larger cities are often greatly handicapped by the lack of adequate facilities for the care of the sick and by lack of provision for operation and emergency treatment. Philanthropic citizens, with big hearts, but often with limited means, try to fill this need by securing rooms in an office building or a dwelling house, and the temporary hospital is established and much excellent service rendered. The office building or residence, however, not having been designed for the purpose, and having been built without regard to hygiene or convenience, fails to function properly. There is much lost motion and lack of complete service, and oftentimes a more retarded recovery than with a building planned for the purpose. The community in which the little hospital here illustrated is to be built has been served by the "office building" type of hospital, and while good results have been accomplished, the new hospital will undoubtedly relieve much suffering.

Fig. 1.—Front view of building (from architect's drawing): Exterior walls are of red brick with roof of red tile; exterior woodwork is painted white; the colonial style is especially adapted to this building, because of its prominent site and spacious grounds.

This hospital is located on a commanding site, away from the noises of business and traffic, with sunny exposure. The exterior of the building is in the southern colonial style of architecture, with the body of red brick. The finish of the portico, cornice and airing balconies is of wood, painted white. The roof is of red tile. The interior finish will be simple in character, with due regard to hygienic construction and ease of maintenance. The floors will be covered with linoleum, and the doors will be of the no-panel hospital type. The walls of the surgical department will be enameled, and the floors will be of tile or terrazzo. The colors employed on the walls will probably be delicate grays or tan. The hardware is to be special hospital type.

The placing of all of the administrative and surgical treatment departments on the first floor allows the exclusive use of the second floor for patients. The operating department, on the first floor, is quite complete, and is sufficiently removed from the entrance to avoid annoyance from that source. From the same section, the roentgen-ray department is approached. The staff room serves as a surgeons' dressing-room. The office is sufficiently near for proper administration. The remainder of the first floor is devoted to the kitchen, dining-rooms, heater and storage rooms. The rear entrance serves as an ambulance approach. While there is space provided for an elevator, the stairs are made broad and are easily ascended.

On the second floor are the rooms for patients, divided into several three-bed wards and private rooms. The serving kitchen, sink room, toilets, bath and linen room provide the necessary accommodation for the proper service for the patients. At each end of the building, large airing balconies enable all patients to be brought into the open air.

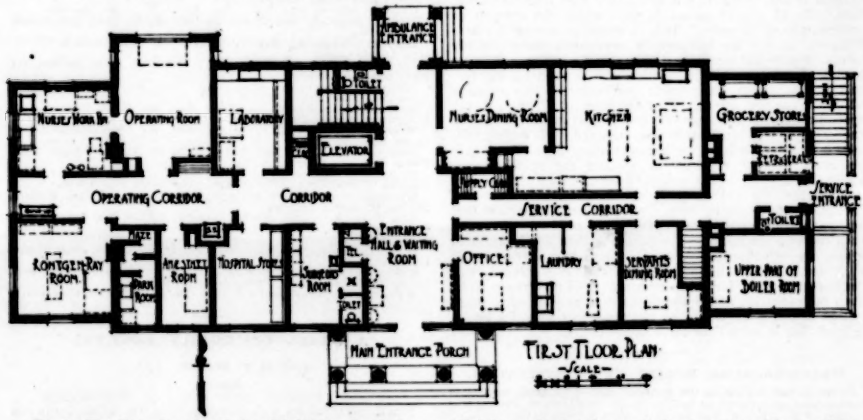


Fig. 2.—First floor plan: All of the administrative functions are provided for on the first floor; note the compactness and convenience of the arrangement; the placing of parts with relation to each other is worthy of study.

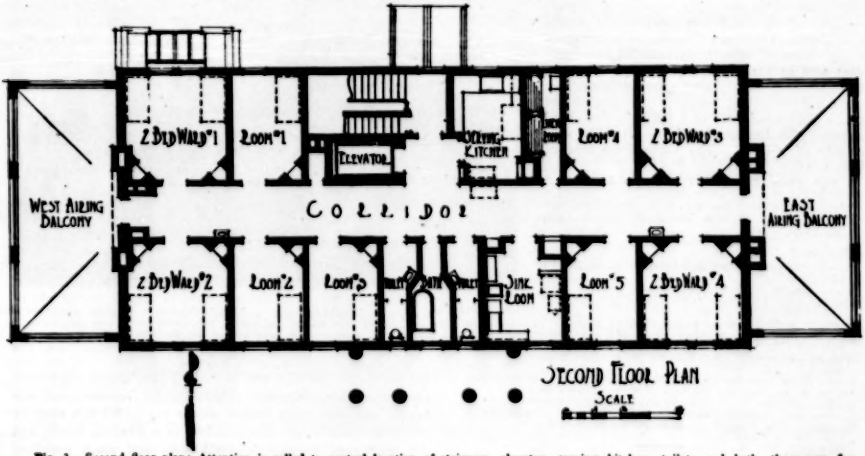


Fig. 3.—Second floor plan: Attention is called to central location of stairway, elevator, serving kitchen, toilets and bath, there are five private rooms and four two-bed wards; at each end is a large airing balcony.

# Social Medicine and Medical Economics

## SOCIAL PEDIATRICS*

HENRY L. K. SHAW, M.D.
Clinical Professor, Diseases of Children, Albany Medical College
ALBANY, N. Y.

In no branch of modern medicine has there been so much progress as in that of the prevention of disease. Emphasis is now being largely directed to health rather than to disease. The triumph of the medical corps in the World War both in this country and abroad over that invisible and insidious enemy—disease—was due largely to preventive measures. Every returned soldier and sailor has received practical instruction in public health, and a new vision of the domain of medicine came to all medical officers who entered the service.

Sir George Newman expresses the present trend of thought when he says that the "first duty of medicine today is not to cure disease but to prevent it." All our human knowledge and experience should be applied to the prevention of disease. Herein lies our greatest service to mankind. To cure is splendid and praiseworthy, but to prevent disease is Godlike and magnificent. Dr. Lyon writes that "some physicians fail because they take a narrow and individualistic view of their work. They get the patient so close to their eyes that they cannot see the public. They see their trade, but fail to recognize their profession." In the struggle for existence and the necessity for making a livelihood, the attitude of the medical profession toward social problems is likely to be narrow, selfish and individualistic. We need a broader vision, and we should appreciate that the claims of the health of the public are greater than those of any individual. Gittings, in an address on "Physicians and Social Service," said that as a class "we have been slow to recognize the importance of many of the lessons taught by sociology, and have allowed our study of disease, the figure in our limelight, to blind us to much of the background out of which disease emerges. The art of medicine of yesterday was too conservative in its conception of its true functions. So far as it has gone, the prevention of disease has proved to be one of the greatest achievements of the science of medicine of today."

Not one of us will dispute this statement; but what is being done to spread the gospel of public health among the physicians of this country? They must be educated, or rather reeducated, in modern medical social problems. A physician engrossed in private practice with its many demands and responsibilities will not have much leisure in which to take up any new line of study. The most satisfactory method lies in the medical school. The mind of the medical student is receptive and plastic, while it is hard to teach new tricks to old dogs. Dr. Ira S. Wile, in an address at the meeting of this section at Rochester in 1912, said that "medical schools exist for the purpose of supplying the community with men who are trained in caring for the public health. If the schools fail to teach their students the methods of preservation of life, they fall short of their ideal purpose. The position of the physician is altering, in that the community no longer regards him merely as an individual, capable of curing individual diseases, but as a specially gifted man, capable of guiding the public in and to health." The physician should be looked on as the leader in public health activities; but this work in a community can never be elevated to a higher degree than the medical profession raises it. A stream is no purer than its source, and we must elevate and educate the source.

*Read before the Section on Pediatrics at the One Hundred and Sixty-Fourth annual meeting of the Medical Society of the State of New York, New York, March 23, 1920.

### OPPORTUNITIES OPEN TO MEDICAL MEN IN SOCIAL WELFARE WORK

My object in this paper is to present a plea for systematic training in social pediatrics in our medical colleges. The prospective medical student should be directed in his premedical course to study sociology and economics and obtain a comprehensive grasp of the organization of modern society. This subject should appeal very strongly to those of us who specialize in diseases of children. By virtue of our training and experience we should take an active part in all social welfare agencies. The child forms the basis of most of our public health work. The foundation for many of the diseases and most of the defects of later life is laid in early childhood. The study of the child in health, the preservation of health and the prevention of disease are as essential in the practice of our profession as that of the study of the diagnosis, pathology and treatment of disease. We have not realized the great opportunities for service and the fulfilment of our highest professional ideals in directing and assisting social welfare and educational work. By our indifference we have allowed the nonmedical social worker to grasp a great opportunity and gather all the honor and glory. The physician, and not the social worker, is the logical arbiter of all problems relating to health. He is the one who should advise and direct and perhaps supervise the activities of health and sociomedical activities. He can uphold the honor and dignity of his profession on a loftier level than by simply being a purveyor of pills. Social medicine opens up great opportunities and new territories for service to members of the medical profession.

Dr. Richard Bolt, general director of the American Child Hygiene Association, proposes as an ideal scheme for the education of medical students in the essentials of infant and child welfare work:

1. A clear understanding of the structure of modern society, with special emphasis on the changes which are taking place in medicine from an individualistic to a community service.
2. Familiarity with the general methods of all social agencies working for the welfare of the child.
3. A knowledge of the causes of infant mortality, and the most approved methods of prevention.
4. A good working knowledge of obstetrics, especially in its relation to the nursing and social needs of the community.
5. Experience in maternity (prenatal) service.
6. A course of pediatrics, laying stress on the fundamentals in infant hygiene and infant feeding.
7. Thorough instruction in modern pediatric methods, with actual experience in a babies' dispensary and in an infant welfare center for prophylactic work.

I wish to submit a syllabus of a course of instruction in social pediatrics which is being carried out at the Albany Medical College. It is not perfect or complete by any means, but it will serve to illustrate the possibilities of such a course and point out some of the functions of social pediatrics.

### INSTRUCTION IN SOCIAL PEDIATRICS AT ALBANY MEDICAL COLLEGE

*The Child in Health:*
- Anatomy and physiology of infancy and childhood.
- Difference from adults.
- Growth and development.
- Periodic physical examination.

*Vital Statistics and Demography:*
- Birth registration. Stillbirths. Illegitimacy.
- Methods of improving.
- Mortality statistics:
  - Rates at different ages and seasons.
  - Effect of season and climate.

*Mortality During Childhood:*
- Definition and significance.
- Distribution in the United States and other countries.

General causes: Prenatal; natal; postnatal; preventable; nonpreventable.
Causes by age periods.
Effect of poverty and ignorance.
Influence of domestic and social conditions:
Age and nationality of mother.
Effects of alcohol and venereal disease.
Food; nursing; milk; proprietary foods; diet.
Preventive methods:
The mother (maternal work; number of children; age of mother).
The child.
The surroundings.
Social conditions: housing, sanitation, etc.

*Prenatal and Maternity Care:*
Childbirth statistics.
Causes of death: Baby: fetal and congenital; mother.
Instruction of expectant mothers.
Systematic examinations.
The mother in industry.
Regulation of midwives.
Prenatal clinics and maternity centers.
Care of mother during pregnancy.
Care of mother: at confinement; hospital.
Prevention of blindness.
The prenatal nurse.

*Infant Hygiene:*
Foundling asylums; baby farms; boarding out and adoption; infant hospitals.
Instruction of mothers: breast-feeding, etc.; proprietary foods.
Importance of pure, clean and safe milk.
Infant welfare stations: municipal; private.
Day nurseries: objects: regulation and inspection; the child welfare nurse.

*Child Hygiene:*
Preschool period: diet and nutrition; physical examination; correction of defects; posture, teeth, adenoids, tonsils, rickets; nursing schools.
School age:
Medical school inspection; physician-nurses.
Periodic examinations: weight, height, etc.
Early treatment of defects: vision, hearing, nose and throat, skin, etc.
Dental clinics; mouth hygiene.
Treatment of dental defects.
Prevention of infectious diseases.
Diet and nutrition; school lunches.
Mental examination; special classes.
Physical training; open air classes.
Supervised play; recreation and playgrounds.
Health education of teachers and pupils.
Little mothers' leagues; Junior Red Cross; Crusaders.
School sanitation, ventilation, fumigation, lighting, cleaning.
Adjustable seats and desks.
The school nurse.

*Care and Education of Abnormal Children:*
Backward and mentally deficient children.
Institutional care; commitment.
The crippled child.
The blind child.
The deaf and dumb child.
The delinquent child; juvenile courts.

*The Child in Industry:*
State and national legislation.
Approved standards of child labor.
Employment certificates.
Educational and physical requirements.
Supervision and periodic examinations.
Widows' and mothers' pensions.

*Tuberculosis in Children:*
Physical examinations.
Protection of exposed children.
Home supervision.
Preventoriums; sanatoriums; day camps, etc.
Follow-up work.

*Child Welfare Propaganda:*
Extension and educational work.
Exhibits, posters, moving pictures, newspaper publicity, pamphlets, etc.
Lectures and demonstrations.
Administration of Child Welfare centers.
National Child Welfare Organizations:
American Child Hygiene Association.
Child Health Organization.
Child Labor Committee.
American Public Health Association.
Parent-Teachers Association.
State and local child welfare organizations.

*Health Agencies:*
Federal:
Children's Bureau.
U. S. Public Health Service.
Department of Education.
State:
State department of health.
Division of child hygiene.
Vital statistics.
Public health nursing.
State board of charities.
State department of education.
Municipal:
Health department.
Board of education.
Child welfare stations.
Private:
Day nurseries.
Maternity centers.
Playground associations, etc.

### POSSIBILITIES OF COOPERATION

Clinical facilities for demonstration and practical instruction can be provided in any city large enough to maintain a medical college. The city bureau of health could make available its various departments, including child welfare stations, tuberculosis clinics, milk and dairy inspection, vital statistics, etc. The bureau of education could provide opportunities for the study of the health and hygiene of the school-child, dental clinics, nutrition classes, and the follow-up work of school nurses. Private agencies that support day nurseries, playground associations, orphan asylums, infants' homes and other places of child welfare work would cooperate in this work of instruction. In fact, the interest of all agencies engaged in health, welfare and relief work could be secured and a full cooperation arranged.

### CONCLUSION

We are now entering on a world wide era of reconstruction in which the subject of health will receive more attention than it has in the past. The medical profession must advance with the spirit of the times and be prepared to take an active and leading part.

Let us, therefore, by our own interest and influence hasten the day when social pediatrics shall take a prominent place in the curriculum of our medical schools. The physicians of the next generation will then be equipped for greater service for mankind.

361 State Street.

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## COMPULSORY HEALTH INSURANCE

At a social insurance session of the National Civic Federation, presided over by Samuel Gompers, Mr. James W. Sullivan of the American Federation of Labor made the following points:

The state may justly carry out measures intended to protect all its citizens alike against the various menaces to health and to control treatment of the sick. In the matter of meeting wage losses, the state may be expected to supervise associations for the purpose, and supply the machinery for such supervision. How much further should it go? The trade unionist stops to reflect when in theory he is brought to the line which sets the wage-workers aside as wards of the state, as subjects of special regulation, and as material for a social machinery run by state officials.

Sickness insurance! What is to be insured? What is sickness? Who is sick? Who is to decide when one is sick? Who is to say when one's sickness is his own fault? Who is to determine justly many questions in the matter of sickness? To what degree is sickness a mere matter of the mind? People of robust mentality ignore the aches and pains which frighten timid people. One's habitual attitude toward sickness counts for much. Some have the doctoring habit, some the "patent medicine" habit, some the habit of ignoring what sends other people to bed. Under any form of sickness insurance, voluntary or compulsory, a certain proportion of the members of any group would quickly develop the habit, to be indulged in to the maximum degree, of being "on the funds."

A fair statement of the present attitude of organized labor is that, in the case of sickness insurance, as with respect to many other propositions, it refuses to take a plunge in support of a project which is part of the program of socialism. Nor is it prepared to support without careful scrutiny measures drawn up by associations not in its membership; it will not approve of any law which will tend to break down its own systems of mutual assistance; it regards the degree to

which the interposition of the state shall extend as a matter to be settled in favor of the principle of liberty of the individual; it resents an indiscriminate classification of wage-earners as objects of public relief; it looks to wider measures than sickness insurance in the social campaign for the reduction of the death rate, the prevention of sickness, the improvement of public methods of caring for the sick and, finally, for the general sharing of the burdens of sickness.

## Book Notices

LA RACHIANESTHÉSIE GÉNÉRALE. Par Professeur Thomas Jonnesco. Paper. Price, 4 francs net. Pp. 126. Paris: Masson et Cie, 1919.

This is an exposition of Jonnesco's method of what he calls general spinal anesthesia. The author wishes to make clear that the essential thing is the method he uses and not the particular substance stovain, which is only an adjuvant that may be replaced by any other local anesthetic in which the surgeon may have confidence. The author uses stovain and strychnin sulphate. He lays great stress on having the substances properly prepared. For his own use he has them prepared in separate ampules: a definite amount of strychnin dissolved in 1 c.c. of distilled water in one ampule, and a definite amount of stovain crystals in another ampule. Both, of course, are sterilized. He emphasizes the importance of having the stovain sterilized by heating it to 100 C. on three different occasions. When ready to be used, the strychnin solution, always 1 c.c. in amount, regardless of the quantity of strychnin contained, is mixed with the stovain in the ampule, and solution is favored by gently heating the ampule. When thoroughly dissolved, it is drawn up in the syringe and slowly injected. Four points of election are given for injecting the solution: the inferior lumbar, the dorsolumbar, the superior dorsal and the midcervical, depending on the extent of the anesthesia desired. It is stated that there are no contraindications to the use of the method; but the dose of stovain, as well as that of strychnin, must be adjusted very carefully to the age and general condition of the patient. During five years the author and his associates performed 11,329 operations by this method. Of this number, 1,035 were high or midcervical, and 10,289 low injections. In this number were included operations on all parts of the body, from head to foot. It is asserted that there were only two deaths that could be attributed to the anesthetic, and these, which occurred in the hands of two of his associates, were due, according to the author, to faulty technic from lack of experience, in that too large a dose of stovain was used for cervical injections. Notwithstanding the excellent results that the author reports and the enthusiasm with which he defends them, the method has found few followers outside of his own associates. He himself says: "It is always necessary to bear in mind that spinal anesthesia is not an empirical method and that it is not to be considered a simple maneuver to be executed according to definite fixed rules in advance. The method requires to be applied by a man of science, conscious of his duty, and knowing that he has in his hands an excellent, exact and powerful agent, but only on condition that he take pains to understand it and to employ it intelligently."

RAMBLING RECOLLECTIONS: AN AUTOBIOGRAPHY. By A. D. Rockwell, M.D. Cloth. Price, $4 net. Pp. 350, with 7 illustrations. New York: Paul B. Hoeber, 1920.

Dr. Rockwell, now in his eightieth year, has been so long out of the active whirl of medical life that one is reminded by this book that he is not only still alive but active so far as writing is concerned. To those who were engaged in practice twenty-five or thirty years ago, the name A. D. Rockwell immediately calls to mind one of the most pretentious and practical books on medical electricity published in this country—Beard and Rockwell's Medical and Surgical Uses of Electricity—a book the popularity of which is attested by the fact that it passed through some ten or twelve revisions and editions. It and the miscellaneous contributions on the subject by these two men had much to do with the wide use of electricity during the last two decades of the nineteenth century. The medical battery—at least the faradic box—was then to be found in the offices of half the physicians of the country. Its uses as a therapeutic agent were almost unlimited, and it was recommended for a variety o conditions, from constipation to ectopic gestation.

The title of this autobiography is descriptive of the book. It is made up of recollections more or less rambling in character. But this is not a fault for the author presents it not as a real biography but rather as comments on men and things, with the story of his own life incidentally woven in. A book of such character—written by a man of wide experience, including that of both private and army surgeon in the Civil War, and extending over three fourths of a century—could not be other than interesting and instructive.

PRAKTISCHE BAKTERIOLOGIE FÜR ÄRZTE UND STUDIERENDE. Von Dr. L. Paneth, Assistent am kgl. Institut "Robert Koch" in Berlin. Paper. Price, 8 marks. Pp. 158, with illustrations. Berlin: Urban & Schwarzenberg, 1919.

This is a brief manual describing laboratory technic for diagnosis of infectious diseases. In general it will be of little use for American physicians and laboratory workers, as many of the methods differ materially from those used in our laboratories. Where the methods are the same, descriptions are available in American publications.

## Medicolegal

### Treatment of Osteomyelitis—General and Special Employment

(*Nelson v. Farrish et al.* (*Minn.*), *173 N. W. R. 715*)

The Supreme Court of Minnesota, which affirms a judgment in favor of the defendants who were sued for alleged malpractice in the treatment of a child afflicted with osteomyelitis in the radius, says that defendant Farrish was called, November 12, to treat the case. The disease grew worse, and, on the 18th, defendant Portmann was called. He attended with Dr. Farrish, examined the arm, and gave directions as to treatment. He did not take full charge of the case, was apparently not expected to return unless called, and, when he left, gave directions that if they "needed him any more to call him." On the 22d he was called again, and came. Dr. Farrish also was present. Dr. Portmann gave some directions as to treatment, but did not come, and apparently was not expected to come again without being called. Dr. Farrish continued to treat the arm. It continued to grow worse, and, December 2, Dr. Portmann was again sent for. He was not at home and, instead, his son came and the next day took the child to a hospital, where he and defendant Portmann performed an operation on the following day. Dr. Farrish's employment then ceased. In January the parents took the child to a hospital in St. Paul, where a surgeon performed an operation in the presence of defendant Portmann, and found it necessary to remove the radius, which was done.

It was conceded by all that the proper treatment for osteomyelitis was by operation, consisting in opening the shaft of the bone and affording drainage of the pus and removal of diseased tissue. The plaintiff charged that the defendants did not advise or suggest that treatment, and did not correctly diagnose the case until the disease had progressed so far that the bone was beyond treatment and the use of the arm virtually lost, whereas it might have been saved. The defendants, on the other hand, insisted that they did promptly diagnose the disease and advised the parents of its true nature, and seasonably advised operative relief, and that the parents objected to any operation, until it was too late to save the arm. The trial judge instructed the jury that if the defendants within a reasonable time made a correct diagnosis and clearly advised the parents of the nature

of the ailment, of the importance of an immediate surgical operation, and of the result likely to follow a refusal, and the parents refused to permit such operation, the verdict of the jury should be for the defendants; but that if the defendants failed to diagnose and treat the child with reasonable and ordinary skill, and such failure resulted in the injury complained of, then the defendants were liable for damages. The supreme court finds no error in this instruction, and holds that the evidence was such as to sustain a verdict for the defendants.

The plaintiff contended that defendant Portmann was employed generally to diagnose, treat and cure, and complained that the jury was instructed that he was called in consultation with Dr. Farrish; but, under the evidence, the supreme court thinks that the ruling was right. However, so far as concerned his liability for what occurred on the occasion of his visits, it was not very material in which capacity he was called. He was called as a physician and surgeon to diagnose the disease and prescribe or direct treatment for its cure, regardless of what Dr. Farrish had done. While he was there he owed the duty to employ reasonable professional skill. The court did not rule or instruct otherwise. There was no claim on his behalf that he had not ample opportunity to diagnose correctly the disease. He claimed that he did so, and advised the family of his diagnosis. In this connection it is pertinent to observe that there was no question but that Dr. Farrish's employment was general. Since the jury found in his favor, it is difficult to see how it could have found otherwise as to Dr. Portmann, whether his employment was general or as a consultant. In no possible view of the case could it be said that the obligation or liability of Dr. Portmann was greater than that of Dr. Farrish. The difference between general and special employment relates mainly to the obligation of the physician to continue his attention. If called generally he must give such continued attention and attendance as the condition of the patient requires. But if called specially and only for the occasion, he owes no duty to repeat his visits or continue his treatment. The court thinks it was the effect of the testimony of the plaintiff's witnesses that defendant Portmann was not expected to return, except when called, and that he owed no duty to do so, and could be held liable for only such damages as resulted from his connection with the case on the occasion of his visits.

### Breach of Contract to Furnish Medical Services—Chronic Diseases—Prolapsus

*(Coffey v. Northwestern Hospital Association (Ore.), 183 Pac. R. 762)*

The Supreme Court of Oregon, in affirming a judgment in favor of the plaintiff for $1,500 damages, says that this was an action for breach of a contract to furnish the plaintiff medical and surgical services in case of illness. The contract stated that it did not cover chronic diseases. In reply to a letter which described fully the plaintiff's condition, the defendant said, in effect: "Your disease is chronic, and not subject to treatment under our contract; but come down, and if we find it is not chronic we will treat you." The reply was substantially a refusal to treat her under the contract for the disease from which she was suffering, on the ground that it was chronic, and therefore not within the contract. No person in the plaintiff's condition would have gone after having been informed that, if she had the sickness which she claimed to have, she would not be treated. If the trouble was, in fact, a chronic one, the defendant was justified; otherwise, its refusal was a breach of the contract which rendered it liable in damages.

The evidence introduced as to the disease from which the plaintiff was suffering indicated that in 1910 she suffered from prolapsus uteri, and that as a result of an operation she was completely cured of that trouble, and was in sound health when she became a party to the contract with the defendant; that this condition continued for about two and a half years; that later, when the plaintiff did hard work or lifting, she had temporary prolapsus, but that her condition always became normal on ceasing such work. The effect of the plaintiff's testimony was that she had frequent attacks or recurrences of the trouble at intervals, produced by overwork or lifting, but that the trouble was not continuous. The evidence on behalf of the plaintiff indicated that she was much more susceptible to attacks of this character than the ordinary woman, but this fact alone did not render the disease chronic.

It is a fact well known, even to laymen, that there are persons whose bones are so brittle from disease or malnutrition that they are broken by blows or falls which would do no particular injury to a person whose bones are normal; but it does not follow that such persons have chronic broken arms or legs. Some persons are poisoned by the slightest contact with poison ivy, while others are not affected by it; but it does not follow that the susceptible person is afflicted with chronic ivy poisoning.

A chronic disease is one of long duration or characterized by slowly progressive symptoms. It appeared that the plaintiff's first attack was cured in three weeks by an operation; that she remained in good health for more than two years, and that subsequent attacks were cured by avoiding the causes which produced them. Whether the plaintiff's ailment was chronic was a question of fact for the jury, which was instructed, in substance, that the burden of proof was on the plaintiff to show that she was not suffering from a chronic ailment.

Lastly, it was a forced construction of the contract to say that it required the defendant to render services only in the city where it had a hospital, when three things were promised the members of the association: (1) free hospital service where a hospital was provided; (2) free medical treatment, without any specification as to where it was to be rendered, and (3) free surgical treatment under the same conditions.

### Epilepsy Not Ground for Annulment of Marriage

*(Behsman v. Behsman (Minn.), 174 N. W. R. 611)*

The Supreme Court of Minnesota, in affirming a judgment refusing to annul a marriage contract on the ground that one of the parties thereto was an epileptic at the time of the marriage, holds that proof that the defendant was an epileptic at the time of such marriage was not, in the absence of a showing of fraud on the part of the afflicted party in concealing the epileptic condition, sufficient to warrant a decree of annulment. It holds that, the legislature not having prescribed epilepsy as a ground for the annulment of marriage, and the courts of the state never having recognized that disease as a cause for nullifying a marriage contract, the judgment of the trial court denying such relief was justified, notwithstanding a finding of fact that the defendant was an epileptic at the time of the marriage. The findings of the trial court in this case were, in effect, that the parties were married in 1907; that the issue of such marriage was three children; that the defendant was and had been ever since she was 2 years of age an epileptic; that the disease continued to grow on her until Sept. 3, 1915, when she became insane and was committed to a hospital for the insane; that she was becoming more irrational and violent and was not expected to improve in her condition; that the plaintiff and the defendant lived together as husband and wife until shortly before the defendant became insane, and that the plaintiff did not know that the disease with which the defendant was afflicted was epilepsy until about Sept. 3, 1915. As conclusions of law, the court found that the plaintiff was not entitled to have the marriage annulled, but that he was entitled to the custody of the children, and the supreme court is of the opinion that the judgment should stand. Section 7090 of the General Statutes of Minnesota of 1915 provides that no marriage shall be contracted between persons either of whom is epileptic, feebleminded or insane, and Section 7107 provides that when either party to a marriage is incapable of assenting thereto for want of age or understanding, or when the consent of either has been obtained by force or fraud, and there is no subsequent voluntary cohabitation of the parties, the marriage may be annulled; but the legislature has not prescribed epilepsy as a ground for annulment of marriage, nor have the courts of Minnesota recognized that disease as cause for nullifying the marriage contract.

# Society Proceedings

## COMING MEETINGS

American Association for Thoracic Surgery, New Orleans, May 1.
American Association of Physicians, Atlantic City, May 4-5.
American Climatological and Clin. Assn., Philadelphia, June 17-19.
American Gastro-Enterological Assn., Atlantic City, May 3-4.
American Gynecological Society, Chicago, May 24-26.
American Laryngological Association, Boston, May 27-29.
American Medico-Psychological Assn., Cleveland, O., June 1-4.
American Ophthalmological Society, Hot Springs, Va., June 15-16.
American Otological Society, Boston, May 31-June 1.
American Pediatric Society, Highland Pk., Ill., May 31.
American Psychopathological Assn., Cleveland, O., June 3.
American Surgical Association, St. Louis, May 3-5.
American Therapeutic Society, Philadelphia, May 7-8.
Arkansas Medical Society, Eureka Springs, June 8-9.
Association of American Peroral Endoscopists, Boston, June 1.
California State Medical Society, Santa Barbara, May 11-13.
Canadian Medical Association, Vancouver, B. C., June 22-25.
Connecticut State Medical Society, New Haven, May 19-20.
Georgia Medical Association, Macon, May 6-8.
Illinois State Medical Society, Rockford, May 18-20.
Iowa State Medical Society, Des Moines, May 12-14.
Kansas Medical Society, Hutchinson, May 5-8.
Massachusetts Medical Society, Boston, June 8-9.
Michigan State Medical Society, Kalamazoo, May 25-27.
Mississippi State Medical Association, Jackson, May 11-12.
Nebraska State Medical Association, Omaha, May 24-26.
Nevada State Medical Association, Lake Tahoe, June 25-26.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Med. Assn., Minot, June 15-16.
Ohio State Medical Association, Toledo, June 1-3.
Oklahoma State Medical Association, Oklahoma City, May 18-20.
Rhode Island Medical Society, Providence, June 3.
Southern Minnesota Medical Assn., Fairmont, Minn., June 28-29.
Western Electro-Therapeutic Association, Kansas City, Mo., May 27-28.
West Virginia State Medical Association, Parkersburg, May 18-20.

## MISSOURI STATE MEDICAL ASSOCIATION

*Sixty-Third Annual Meeting, held at Jefferson City, April 6-8, 1920*

### Artificial Anus

DR. W. T. COUGHLIN, St. Louis: A preoperative explanation of the operation to the patient is advisable. The amount of relief to be expected varies with the indication for the operation. Not much benefit to the primary condition is to be expected when the operation is undertaken for cancer of the bowel below. The decision for or against the operation should be left to the patient except when the operation is performed for the relief of acute obstruction.

### Autoplastic Repair of Ununited Fractures and Bony Defects

DR. ERNEST F. ROBINSON, Kansas City: Bone surgery has passed through many changes and contradictory phases, but we have at last arrived at a satisfactory rational method in the autoplastic repair of bone. Some fundamental facts have been deduced in reference to the autogenous repair of fractures: 1. Fractures in which good functional results may be secured by external means (and this number in recent years has been greatly increased by modern military splints and devices) should not be operated on. 2. In fractures which cannot be properly reduced and immobilized, autoplastic repair is usually the only safe procedure. All metal devices, Lane plates, nails, screws, clamps and all foreign bodies in bone fractures are a failure, and prevent rather than produce union. Autoplastic graft is resistant to infection. It is absorbed or becomes an integral part of the bone itself. Two methods of bone transplantation may be considered: (*a*) the bone inlay, as perfected by Albee, or (*b*) the dowel peg or intramedullary splint. In either or both we must have: (1) an aseptic operative wound; (2) a live transplant from the same individual—preferably with periosteum; (3) actual contact between graft and bone, and (4) perfect and complete immobilization. Usually there is complete absorption with bone organization. Occasionally, early absorption takes place because of specific ferments. My own preference is in favor of the medullary transplant over the bone inlay, as there is less likelihood of infection and no foreign substance (such as catgut or tendon sutures to be absorbed) is left in the wound. In the great percentage of cases, union with satisfactory results can be assured. Such operations are as uniformly successful as are any in surgery.

### Traumatic Aneurysm

DR. HERBERT S. VALENTINE, Kansas City: In traumatic aneurysms, particular attention is called to the possibility of hemorrhage from one false aneurysm giving rise to one or even more secondary aneurysms. Couteaud's observations regarding the weakness of the pulse proximal to an arterial lesion may be of value, especially when other localizing symptoms are absent. Contrary to the commonly accepted ideas, it has been found by English surgeons that in many cases simultaneous ligation of vein and artery may be safer as regards both life and avoidance of gangrene, than is ligation of the artery alone.

### Treatment of Dacryocystitis by Curettage and Rapid Dilatation

DR. JOHN GREEN, JR., St. Louis: Curettage of the sac and duct as a treatment for chronic dacryocystitis was proposed by Thompson in 1918. This method proved fairly successful in my hands, but some failures led me to supplement this procedure by immediate rapid dilatation of the lacrimonasal duct. The dilated duct thus affords adequate primary and secondary drainage. The operation is facilitated by the use of specially designed lacrimal sac burrs and lacrimal duct reamers.

### Subconjunctival Injections in the Treatment of Ulcers and Infected Wounds of the Cornea

DR. W. H. SCHUTZ, Kansas City: The lack of any generally accepted method of treating corneal infections led me to try mercuric cyanid. Dr. E. L. Jones of Maryland for some time persisted in drawing attention to this method, and declares that it has proved the most reliable and effective means of treating the conditions described. The power and healing effects of the injections are thought to be due not to the specific drug itself but to some process in which the drug merely acts to increase the circulatory activities to distend and flush the lymph channels. The advantages of this method may be thus summed up: There is no destruction of corneal tissue; the site of the ulcer, the stage it is in, or the size or any other reserve, need not be considered. The healing is sure and rapid, the transparency of the cornea more marked and scar formation less evident. The influence of the treatment on the subjective symptoms is very evident and positive. Immediately after injection, the pain is more or less of a severe type, lasting from ten to thirty minutes, but made bearable by the application of hot compresses. When the postoperative pain has ceased, further suffering from the disease vanishes entirely in the majority of cases; and in the few instances in which it does not, the amelioration is so positive that the patient seldom fails to express words of gratitude.

### The Present Status of Nitrous Oxid Anesthesia

DR. MORRIS H. CLARK, Kansas City: The failure of nitrous oxid to keep pace with ether and chloroform as a general anesthetic is due to difficulty in mechanically handling the gas, and failure to recognize that it is a selective anesthetic not applicable to all cases. It is an anesthetic of details. Nitrous oxid should never be given except in connection with oxygen. Modern apparatus should have these necessary requirements: reducing valves for both nitrous oxid and oxygen, and means of controlling the rate of flow, percentage of mixture and pressure in the breathing bag. Ether attachment should be present in case of need. Ether in small amounts may be used to bridge over more painful procedures, or for stimulation during shock. The amount need not be more than from 1 to 4 drams during the course of a long anesthetic. This small amount produces no harmful after-effects.

### Cardiolysis for Chronic Mediastinopericarditis

DR. ELSWORTH S. SMITH, St. Louis: The condition may be recognized through the presence of chronic ascites not explainable in other ways, and physical signs of fixation of heart dulness, diastolic shock, retraction of interspaces about the apex and below the angle of the left scapula, and through fluoroscopic examination. Up to June, 1913, Sommers had collected data on only thirty-eight cases performed abroad

and none in this country, and since that date we have found only one in this country, so that the two cases here reported are the fourth and fifth cases recorded in this country. Among these forty-five reported cases there had been only nine failures, in four of which necropsies revealed errors in diagnosis.

### The Actual Cautery in the Treatment of Superficial Cancers

Dr. Charles F. Sherwin, St. Louis: The only cure for cancer is a total destruction of all its pathologic cells. Any such cells not quickly destroyed by treatment gradually become more resistant and are often stimulated into increased rapidity of growth. Good cosmetic results are desirable, it is true, but quick and certain destruction of all tumor cells is absolutely imperative regardless of any cosmetic result, for cancer let alone or left behind will surely kill. In those types of superficial cancers variously known as rodent ulcers, and epidermoid or basal-cell carcinomas, which tend to remain localized, total extirpation of the affected area together with a strip of normal skin and underlying tissues afford the best possible chance of complete cure. This can be accomplished by clean excision with a scalpel; but if it accidently cuts into cancer, it will scatter and implant it along any further line of the incision. The electric cautery loop at a dull red heat cannot thus transplant cells, but cuts skin readily, does not char, yet destroys cells 2 or 3 mm. beyond the incision line; controls practically all hemorrhage at once; blocks lymphatics; readily permits gross differentiation of normal and pathologic tissue; obtains the entire lesion at once for microscopic diagnosis, and, with properly regulated heat, is capable of exceedingly fine dissection about tendon sheaths, eyelids, etc. Local anesthesia makes the procedure painless; the postoperative pain is negligible unless bone is involved; the area granulates readily; the scar is often either unnoticeable or a slight smooth depression, or in extensive areas contracts into a raised line. The final result is limited only by the judgment of the operator as to the boundaries of the lesion, a factor likewise necessarily present in any form of treatment. We do not advocate cautery excision in squamous cell cancers in which adjacent lymphatics and glands early become involved, as lower lip, breast and similar types. Soldering irons at dull red heat or less are ideal for large lesions, or for temporary cleaning up of foul, ulcerated, incurable cases. Cauterizing bone is often necessary in far advanced cases, but causes considerably more pain, and is very slow to discharge the sequestrum and heal. Caustics act largely on the surface, are never subject to such accurate control as to depth and boundaries, cause great pain, more often stimulate the tumor to rapid growth, and usually cause an unsightly scar. Radium is often as painful as the cautery wound, never removes the cancer bearing area, requires weeks or months to effect the complete retrogression, occasionally stimulates more rapid growth, and often after apparent cure, nodules recur in the scar. However, it usually conserves adjacent tissues, and its cosmetic results are often equal to or occasionally better than the cautery scars.

### Operative Treatment of Carcinoma of the Tongue

Dr. V. P. Blair, St. Louis: The majority of carcinomas of the tongue are probably mildly malignant, the unsatisfactory results and the high mortality rate being due to late and inefficient operation. Some cases are highly malignant from the onset. Surgical intervention should be undertaken early, with complete elimination of all conditions which suggest the possibility of cancer. These operations may be only a wide local excision, but can be made as radical as can an operation on the breast. The preoperative and postoperative treatment of these patients is of the utmost importance. Careful attention to the details of these will permit of more extensive operations. Roentgen-ray and radium treatments of sufficient activity are helpful adjuvants to surgery.

### Summer Diarrhea of Infants: A Study of the Pus Cells in the Stools

Dr. John Zahorsky, St. Louis: It has been found that the majority of cases of summer diarrhea show a great increase in the cellular content of the stool. Our study indicates that most of the diarrheal diseases of summer are infectious processes. Adults are a common source of the virus that produces diarrhea. The method of conveyance is by contact, insects and, more frequently, by milk and ice cream.

### Feeding of Athreptic Infants

Dr. Maurice J. Lonsway, St. Louis: In athrepsia or marasmus it is necessary to give in large amount food which contains the elements necessary to nutrition and which does not cause gastro-intestinal disturbances. Whole lactic acid milk with the addition of glucose, dextrin and maltose, in the form of corn syrup as advocated by Marriott, meets these requirements. High percentages of carbohydrate can be given. It is not necessary usually to remove the fat. These babies begin to gain as soon as the caloric intake is sufficient. This is sometimes 200 or more calories per kilogram.

### Interpretation of Bacteriologic Evidence in Influenza and Infections of Unknown Origin

Dr. R. A. Kinsella, St. Louis: The variety of reports published on the bacteriology of epidemic influenza leads to doubt as to the validity of our usual methods of investigating causes of infection. Furthermore, we are disturbed by the reflection that perhaps many of the bacteriologic reports bearing on the cause of infectious processes are fallacious. Obviously, there is need of adopting a central fundamental principle about which our studies can revolve. Such a principle is offered in the consideration that native bacteria, being both adaptable and adapted to their surroundings, do not cause epidemics. Conversely, the bacteria that cause epidemics cannot be those that are common inhabitants of human bodies, but must be unadapted and unadaptable invaders. This principle is effectively illustrated by contrasting adapted and unadapted members of the same group: namely, colon bacilli with typhoid bacilli; Group IV pneumococci with Group I pneumococci; diphtheroid bacilli with diphtheria bacilli, and green streptococci with hemolytic streptococci. Following such a principle, we shall not be misled into ascribing the etiology of influenza to such common varieties as green streptococci and the Pfeiffer bacillus. An analogous situation exists in the study of the so-called streptococcus infections. There is no doubt about the virulence of the hemolytic variety, or about its contagiousness. But we cannot intelligently attach etiologic importance to such ever-present, adapted bacteria as the green streptococci, when considering highly individualized disease processes. Such bacteria as green streptococci and Pfeiffer bacilli depend for their invading activities on a profound local lowering of resistance.

### A Plea for a State General Hospital Articulated with County General and Other Hospitals, and the Completion of Medical Education in the University of Missouri

Dr. Frank G. Nifong, Columbia: Modern medicine and the hospital idea in medical service are inseparable. Hospital and health service is one of the functions of the state for the promotion of the general welfare and it is also the business of the local communities and counties. This matter is not second in importance to education. The county general hospital is a crying need for our more populous counties, no less needed than in our cities. The obligation of the state to give its citizens higher and technical education is a well established principle. The general welfare can be promoted in no better way than by furnishing the best possible medical education to its citizens. We need a great medical center in Missouri University both for undergraduate and for graduate work. The medical department of the university should cooperate with the state board of health in all its activities. To accomplish the various purposes, the state medical department must have adequate clinics and hospitals. A state general hospital articulated with various county and other standardized hospitals would furnish exceptional and unique clinical facilities. This would bring all the people and profession of the state into intimate touch with all health matters and health service.

# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### American Journal of Physiology, Baltimore

March 1, 1920, 52, No. 2

Blood Volume Studies. I. Experimental Control of a Dye Blood Volume Method. C. W. Hooper, H. P. Smith, A. E. Belt, and G. H. Whipple, Berkeley, Calif.—p. 205.
*Blood Volume Studies. II. Repeated Determination of Blood Volume at Short Intervals by Means of the Dye Method. H. P. Smith, San Francisco.—p. 221.
Blood Volume Studies. III. Behavior of Large Series of Dyes Introduced into the Circulating Blood. A. B. Dawson, H. M. Evans, and G. H. Whipple, Berkeley, Calif.—p. 232.
*Blood Volume Studies. IV. Blood Volume as Determined by Change in Refractivity of Serum Nonprotein Fraction After Injection of Certain Colloids into the Circulation. I. McQuarrie and N. C. Davis, San Francisco.—p. 257.
*Influence of Splenic Extract on Number of Corpuscles in Circulating Blood. A. W. Downs and N. B. Eddy, Montreal.—p. 279.
Physiologic Changes Produced by Variations in Lung Distention. Efficiency of Pulmonary Circulation in Overcoming Obstruction. F. P. Chillingworth and R. Hopkins, New Orleans.—p. 289.
*Experiments on Pathologic Physiology of Acute Phosgen Poisoning. W. J. Meek and J. A. Eyster, Madison, Wis.—p. 303.
To What Extent are the Physiologic Effects of Carbon Dioxid Due to Hydrogen Ions? M. H. Jacobs, Philadelphia.—p. 321.
*Gastric Response to Foods. Response of Normal Human Stomach to Vegetables Prepared in Different Ways. R. J. Miller, H. L. Fowler, Olaf Bergeim, M. E. Rehfuss and Philip B. Hawk, Philadelphia. —p. 332.
Relation of Suprarenals to Certain Experimental Hyperglycemias (Ether and Asphyxia). G. N. Stewart and J. M. Rogoff, Cleveland. —p. 366.
*Experimental Production of Edema as Related to Protein Deficiency. E. A. Kohman, Chicago.—p. 378.

**Dye Blood Volume Method.**—A method is outlined by Smith in which the dye blood volume method is adapted to repeated determinations on the same animal at short intervals. The soundness of the method is demonstrated by controls done in vitro as well as repeated determinations performed in rapid succession on the same animal. The experimental error does not exceed 5 per cent. Fluctuations in blood volume greater than this are sometimes seen over long periods of time. These fluctuations arise from physiologic factors, the exact nature of which is not yet understood. The dye used is brilliant vital red.

**Blood Volume Determinations After Injection of Certain Colloids into Circulation.**—McQuarrie and Davis outline a method of determining blood volume which consists essentially in reading refractometrically the serum nonprotein increase after the intravenous injection of a known amount of acacia or gelatin solution, or a mixture of the two. By this method they have found in the dog an average of 9.76 c.c. blood per hundred grams body weight. In the rabbit an average of determinations using samples removed five minutes after injection of medium gives a volume of 6.49 c.c. per hundred grams body weight. Of great importance is the fact that hemolysis, lipemia and cholemia do not affect the accuracy of determinations by this method.

**Influence of Splenic Extract on Number of Corpuscles in Circulating Blood.**—Downs and Eddy found that the subcutaneous injection of protein-free splenic extract is followed immediately by a decrease in the number of erythrocytes in the circulating blood. The decrease is temporary. The decrease is probably the result of a direct hemolytic action of the splenic agent. The decrease is frequently accompanied by a very transient increase in the number of white corpuscles.

**Pathologic Physiology of Acute Phosgen Poisoning.**—A study was made by Meek and Eyster of the pathologic physiology of acute phosgen poisoning. The microscope and the roentgen ray both show an early injury to the linings of the deep respiratory passages. Irritation from this results in a certain amount of reflex cardiac inhibition and vasoconstriction. Coincident with these changes there is a direct action of the gas on the red blood cells, which causes them to agglomerate and obstruct the pulmonary capillaries. The removal of red blood cells from the active circulation in this way results in a decreased hemoglobin percentage. The plugging of the capillaries throws a strain on the right heart and a right-sided cardiac dilatation is apparent. These are the chief characteristics of Stage 1. Even during Stage 1 the injury to the alveolar membranes and the increased pressure have initiated the transfusion of fluid from the blood into the tissue spaces and later into the air passages of the lungs. The rapid development of this edema is the chief characteristic of Stage 2. It results in hemoglobin concentration, reduction in blood volume and decrease in heart size, all three of which proceed to extreme degrees. Death ultimately results from decreased oxygenation of the pulmonary blood and from oxygen starvation of the tissues due to decreased blood volume, the latter, as Underhill states, being probably the more important.

**Response of Normal Human Stomach to Vegetables Prepared in Different Ways.**—A study was made by the authors of the response of the normal human stomach to thirty different kinds of vegetables prepared in different ways. The evacuation times and acid responses of the stomach were determined and physical and chemical changes in the ingested food noted. In general, raw vegetables low in protein, such as carrots, celery, tomatoes, cabbage, lettuce and cucumbers, leave the stomach rapidly, develop moderately high free acidities but little combined acidity and leave the stomach without great change. Boiled vegetables show much more rapid and complete disintegration. Vegetables high in starch, such as potatoes, show very considerable starch digestion before leaving the stomach. In certain cases hardly any starch reaction could be obtained toward the end of digestion.

**Experimental Production of Edema as Related to Protein Deficiency.**—The findings obtained by Kohman from experimental study she believes warrant the general conclusion that if it is necessary to limit the amount of protein in a diseased condition or in a period of national economic stress (as was necessary in some of the European countries during the recent war), it is advisable to administer the low protein diet in a form free from excess of water and any acid producing foods. Symptoms of developing edema must be looked for and adequate protein supplied immediately to effect a cure.

### American Review of Tuberculosis, Baltimore

March, 1920, 4, No. 1

Tuberculosis Problems of To-day: Doctrines, Conditions and Needs. D. A. Stewart, Ninette, Manitoba.—p. 1.
Tuberculosis Problem in San Francisco. G. H. Evans, San Francisco. —p. 12.
Prevention of Tuberculosis: What We Should Teach To-day. W. J. Dobbie, Weston, Ontario.—p. 23.
Experiment in Sanitary Education. H. R. M. Landis, Philadelphia. —p. 32.

### Boston Medical and Surgical Journal

April 8, 1920, 182, No. 15

Medical Aspect of Dental Irritation. W. A. Lurie, New Orleans. —p. 359.
*Ileostomy for Postoperative Obstruction Following Appendectomy. E. P. Richardson, Boston.—p. 362.
Surgical Treatment of Acute Empyema by Valve Drainage, Provided by Flap of Skin, Fascia, and Muscle, under Local and Paravertebral Anesthesia. W. R. Morrison, Boston.—p. 366.
Chest Conditions Resulting from War Wounds and Their Surgical Treatment. B. H. Alton, Worcester, Mass.—p. 369.
*Severe Case of Gas Bacillus Infection with Recovery. D. S. Adams, Worcester.—p. 373.

**Treatment of Intestinal Obstruction.**—In the consideration of the treatment of obstruction, Richardson says a distinction should be made between obstruction occurring shortly after operation and obstruction occurring from spontaneous causes, or long enough after operation for adhesions to cicatrize. The place of enterostomy is distinctly different in these two classes of cases. In the first class, its place as an evil occasionally necessary is clear. In the second class, obstruction by recent adhesions, it may be both palliative and curative. Good results depend on operation being undertaken early, and it is far better to operate on an occasional case unnecessarily than to postpone operation until the latter stages of obstruction have developed.

**Gas Bacillus Infection and Recovery.**—A patient who received a gunshot wound of the leg developed gas gangrene

extending up to his perineum and groin within thirty-six hours. It was rapid in its advance, and yet was controlled by amputation through, and not above, the active process. The case appeared hopeless, but to give the man the benefit of the doubt, Adams performed a guillotine amputation about mid-thigh, with preservation of skin flaps. Dichloramine-T dressings were applied to the raw surface. During the operation 800 c.c. of fresh blood was given, followed by 1,500 c.c. of physiologic sodium chlorid solution containing 2 per cent. sodium bicarbonate. The result was excellent.

## Medical Record, New York

April 10, 1920, **97**, No. 15

Study of Certain Bands in Right Upper Abdominal Quadrant. W. S. Bainbridge, New York.—p. 593.
Observations After Severe Gunshot Fractures of Long Bones. C. W. Perkins, New York.—p. 598.
Case of Bilocular Uterus with Carcinoma in Left Horn. O. C. Melson, Rochester, Minn.—p. 604.
*Differential Diagnosis Between Pains of Tabes Dorsalis and Those of Focal Infection. A. M. Crance, Bay City, Mich.—p. 606.
Mon-Arsone in Treatment of Syphilis. B. L. Wright and L. A. Kennell, U. S. Navy, and L. M. Hussey.—p. 607.
Cases of Sudden Cavities in History. C. G. Cumston, Geneva, Switzerland.—p. 609.
Bronchial Asthma. E. Zugsmith, Pittsburgh.—p. 611.

**Differential Diagnosis Between Tabes and Focal Infection.**—Crance cites a case diagnosed as tabes, the patient being treated unsuccessfully for syphilis, in which complete relief from symptoms followed the extraction of abscessed teeth. All the physical signs were suggestive of tabes, but intense antisyphilitic treatment for nine years failed to give relief to the patient. Wassermann tests had always been negative, but the lightning pains were typical. Romberg's sign was slightly positive and there was a suggestion of an ataxic gait. Three weeks after the extraction of all abscessed teeth, the patient was completely relieved of all his symptoms, nor had any of them returned within two months, when he was last seen.

## New York Medical Journal

April 3, 1920, **111**, No. 14

*Study of Effects of Alcohol from a New Angle. C. S. Potts, Philadelphia.—p. 573.
*Alcohol a Nerve Stimulator. W. H. Porter, New York.—p. 579.
Chemical Aspects of Wood Alcohol Problem. C. Baskerville, New York.—p. 580.
Lesions in Wood Alcohol Poisoning. C. Norris, New York.—p. 583.
Wood Alcohol and the Eyes. C. W. Cutler, New York.—p. 585.
Wood Alcohol Poisoning. A. Comora, New York.—p. 588.
Narcotic Drugs and State Legislation. A. D. Greenfield, New York.—p. 588.
Management of Empyema. A. McGlannan, Baltimore.—p. 590.

**Effects of Alcohol.**—While not attempting to say anything good of the use of alcohol as a beverage, Potts endeavors to show that statements of its bad effects on the human race are exaggerated. He also protests against allowing hysteria, hypocrisy and cowardice to influence the settlement of medical questions. It has long seemed to him that if alcohol was nearly as potent a factor in causing mental and physical deterioration as is claimed by many, by this time the world should be peopled almost entirely with physical and mental weaklings. Therefore, the world, instead of progressing as it has, should have gone backward, and the average length of life should be much less in spite of the increase in knowledge and skill in the treatment of disease. Potts believes that most of the indictments of alcohol are based on the results of laboratory work and the study of statistics, and that such evidence is often fallacious and not consistent with actual experience. Potts gives biblical, historical and biographic references to prove his point that alcohol does not cause mental and physical deterioration. Speaking on the effects of alcohol in those who do not use it and do not wish any one else to do so, Potts claims that many such are undoubtedly mentally peculiar. They exhibit a form of bolshevism in that they want to rule or ruin. They alone are right. In furtherance of their views they believe in false statement, vilification, and slander of those who do not agree with them. They refuse to believe conclusive evidence (which according to an old definition means insanity). They advocate confiscation and destruction of legally owned property, illegal exercise of police power, and they tempt people to do the things they protest against, so that they can show how wicked the world is. Potts is of the opinion that this intolerant exhibition of superiority deliberately shown by this extreme section is based on a form of egoism; it is a consequence of a psychologic self-gratulation and self-esteem which borders on an obsession and is regarded by some authorities as pathologic. The burthen of Potts' paper is summarized as follows: That alcohol is not necessarily a deterrent to good work and to the attainment of greatness; that the world is not going backward in spite of its long continued use of alcohol, and so far as its use is concerned is in no danger of doing so; that every one who uses acoholic beverages is not per se a drunkard and unable to do his share of the world's work. Potts does not dispute that it may be a cause of harm, both from the medical and social point of view, but it also, from the former point of view, may be an agent for good. He believes that legislation influenced my perversion of facts, hysteria, hypocrisy and cowardice is of more danger to the country than alcohol. There never was a time when common sense was more needed and never a time when it was less prevalent.

**Alcohol a Nerve Stimulator.**—Clinical observation has convinced Porter that many lives have been saved by the proper use of alcohol. He considered it to be a great mistake to drop so valuable an agent from the pharmacopeia—an agent whose action is so definitely known.

## Porto Rico Medical Association Bulletin, San Juan

March, 1920, **14**, No. 125

*Rapid Staining Technic for Malaria Plasmodium. P. Gutiérrez Igaravidez.—p. 1.
*Garlic as Condiment and Drug. F. del Valle Atiles.—p. 5.
Precautions with Roentgen-Ray Work. J. Barreiro Lago.—p. 10.

**Staining Technic for Malaria Plasmodium.**—Gutiérrez describes experiences with the different staining methods in vogue to decide which method is the most practicable and reliable. His final conclusion is in favor of the Tiedmann technic, slightly modified. A 1 per cent. solution of methylene blue in methyl alcohol is made, and a similar solution of eosin, and these are kept in dark colored vials. When ready to use, 10 gm. of each solution and 10 gm. of methyl alcohol are mixed, and 10 or 15 drops of the reagent mixture are poured on the smear of blood dried in the air. Then 20 or 30 drops of neutral, filtered water are added immediately, and the slide is tilted to insure the complete blending of the stain and the water. In one and one-half minutes—counting from the moment the stain had been dropped on the specimen—the preparation is rinsed rapidly with water and dried with blotting paper, when it is ready for examination under the microscope. The water used does not have to be distilled water but it must be neutral; he prefers rain water for the purpose. Filtered water from any source can be used, provided that it is neutral. He tests for this by adding a small amount of pulverized hematoxylin to a test tube containing 100 c.c. of the water and agitating gently. If the water turns yellow, this shows acidity, while a deep violet tint indicates that it is alkaline. A light violet tint indicates that the water is neutral and suitable to use. By adding a few drops of a 1 per cent. solution of sodium bicarbonate to the water and then a little more hematoxylin, comparing the tint with a control tube, the neutral reaction can soon be realized. This staining technic shows up all the forms of the plasmodium of malaria and other parasites of the blood, and it is excellent also for the differential leukocyte count. In conclusion he emphasizes that with this simple and reliable technic any practitioner can examine blood specimens, himself, without expensive equipment or relying on a distant laboratory.

**Garlic as a Drug.**—Del Valle Atiles discusses the therapeutic effects of garlic as reported in the literature, and urges further study in this line as tradition has long credited *Allium sativa* with medicinal virtues. The records of comparatively recent years show that garlic has been advocated in whooping cough in adults, in tuberculosis, in infantile diarrhea, in typhoid, in treating wasp stings, as a stimulant of secretions and as a vermicide, diuretic, anticatarrhal, etc.

## Surgery, Gynecology and Obstetrics, Chicago

April, 1920, 30, No. 4

*Localization or Elimination of Cerebral Tumors by Ventriculography. W. E. Dandy, Baltimore.—p. 329.
*Experimental Study of Ureteral Ligation; Demonstration of Late Results to Ureter and Kidney. J. R. Caulk and R. F. Fischer, St. Louis.—p. 343.
Abnormalities Resulting from Remains of Omphalomesenteric Duct. Report of Two Cases. M. Barron, Minneapolis.—p. 350.
Gangrene of Ectopic Kidney from Twisted Pedicle. J. L. Ransohoff, Cincinnati.—p. 356.
*Toxic Goiter Following Influenza. C. A. Roeder, Omaha.—p. 357.
Diverticulum of Descending Colon Causing Hydronephrosis. G. F. Straub, Honolulu.—p. 359.
*Narcosis Tremor and its Treatment. T. Rietz, Västervik, Sweden. —p. 361.
Unreliability of Tempertaure in Otitis of Infants and Children as an Indication for Mastoid Operation. F. Whiting, New York.—p. 364.
*Wassermann Reaction and Miscarriages. H. Goodman, New York. —p. 368.
*Use of Potassium Mercuric Iodid for Skin Disinfection. W. F. McKenna and H. A. Fisher, Brooklyn.—p. 370.
*Study of Arteries Supplying Stomach and Duodenum and Their Relation to Ulcer. T. B. Reeves, Rochester, Minn.—p. 374.
Pneumoperitoneum. B. H. Orndoff, Chicago.—p. 386.
Gas Cysts of Intestine: Report of Case. H. G. Sloan, Cleveland. —p. 389.
Rhinophyma. M. G. Seelig, St. Louis.—p. 394.
Abdominal Surgery in Casualty Clearing Station and Evacuation Hospital. W. M. Thompson, Chicago.—p. 398.
*Utilization of Transposed Uterus for Cure of Extensive Vesicovaginal Fistula. Report of Case. C. E. Dowman, Atlanta.—p. 403.
*Skin Grafting by Means of Freezing with Ethyl Chlorid. G. Torrance, Birmingham.—p. 405.
Murphy Button Retained Four Years; Complicated by Ulcer at Site of Gastro-Enterostomy. A. F. Tyler, Omaha.—p. 406.
Amputation Stump Retractor. P. W. Sweet, Rochester, Minn.—p. 407.
Facility in Closure of the Paramidian Upper Abdominal Incision. C. A. Pannett, London, England.—p. 408.
Enucleation of Eyeball and its Subsititute Operations. J. E. Weeks, New York and Allen Greenwood, Boston.—p. 410.

**Ventriculography.**—Ventriculography has been done by Dandy in more than seventy-five cases. The majority of these patients had hydrocephalus: in many cases ventricular dilation was suspected and the injection of air made the diagnosis certain. In many others, the injection was made in order to determine whether the disease was progressive or stationary, in other words, as a means to determine whether or not operative treatment should be instituted. In many cases, Dandy says, the localization of the growth can easily be determined by signs and symptoms and in such instances he has at present no intention of instituting ventriculography, although he feels that eventually this method may be important in differentiating the type of tumor and determining the kind of operative treatment which is necessary. This possibility is strongly suggested by two of the cases described. Five cases are described, each representing entirely different findings and showing the range of usefulness of this procedure when tumors of the cerebral hemisphere are suspected. In all but one of these, the ventriculogram was the only means by which a positive localization could be made. One tumor occluded a lateral ventricle and dislocated both lateral ventricles. Another tumor altered the size and shape of one lateral ventricle. In a third case a cerebral tumor, though suspected, was eliminated by the hydrocephalus. In a fourth case a unilateral hydrocephalus was demonstrated.

**Ureteral Ligation.**—Faced with the difficulties of deligating a ureter, such as reopening an abdominal wound and searching for a small tie in a pelvis imbedded with plastic exudate, and the ureter incorporated with the uterine vessels, with the consequent danger of hemorrhage and the possibility of cutting the ureter with a resulting fistula—certainly a much more serious operation than a double nephrostomy—and with the same difficulty attending a ureterovesical anastomosis (with the exception of hemorrhage), Caulk and Fischer are of the firm belief that the safest method of protecting the individual is an immediate double or single nephrostomy. If a woman has undergone a pelvic operation complains of pain in the kidney, which is usually about the third day, and this kidney is found to be enlarged and palpable, not having been so beforehand, such symptoms are highly suggestive of ureteral ligation. If the patient's condition would warrant it, a ureterogram would clinch the diagnosis. It is then for the surgeon to decide whether it is better for the patient to allow the kidney to die or to try to protect it. The danger of a unilateral nephrostomy should be extremely slight, as it can be done under local anesthesia and certainly quickly under gas.

**Toxic Goiter.**—Eight cases are cited by Roeder. Of these, three had adenomas which suddenly became very toxic. Five cases of hyperthyroidism had their onset definitely following influenza.

**Narcotic Tremor.**—Thirty-three cases of narcosis tremor have been studied by Rietz. With two exceptions only, the patients were men. Most of the patients were between the ages of 25 and 40. Neither the hospital records nor the objective examination of the patient has afforded any exact means of determining the factors which may possibly be considered as favoring the appearance of the spasms. Neither the technic used in administering the anesthetic nor the anesthetic seem to make any difference nor does the position of the head, etc. The part of the body on which the operation was performed was irrelevant to the appearance of the tremor. On the hypothesis that narcosis tremor is the result of an abnormal irritation of the brain produced by the anesthetic which is conducted thither by the blood, Rietz has endeavored to overcome this phenomenon. To eliminate, at least for a moment, the influence of the irritated motor centers, during an operation on a boy, aged 16, he pressed, for a few seconds, on the neck in the fossa carotica. The result was evident at once; the narcosis tremor disappeared as by magic. It appeared again, however, when the pressure was removed. Renewed experiments had precisely the same effect. When pressure was again applied for a somewhat longer period (about one-quarter minute), the spasms ceased definitely. Although on some occasions the maneuver had doubtful results or none at all, continued observations still showed that the measure was of value. In the thirty-three cases mentioned the measure was used twenty-nine times; four patients had short spasms which ceased of themselves and did not call for treatment. The other twenty-nine cases fall into three groups as follows: In Group 1, the effect was certain in nineteen cases; in Group 2, the effect was uncertain in five cases; in Group 3 the effect was nil in five cases. In no way does the result vary so far as the degree of unconsciousness is concerned nor does the result bear any relation to the duration of the narcosis. It is easier to apply pressure in this region if one stands at one side of the patient and turns his head over toward the other side. The pressure is applied either with the thumb or the four fingers together.

**Wassermann Reaction and Miscarriages.**—Goodman found that among 1,320 pregnant women, 87 per cent. were Wassermann negative. Only 6.7 per cent. gave a 4 plus positive reaction, and in 2 per cent. more of the cases, the Wassermann was 3 plus positive. Of the Wassermann negative multiparas, 37 per cent. had suffered one or more miscarriages as compared to 52 per cent. of the 4 plus positive cases. Only one woman among the 1,320 gave a history of having been known to be infected with syphilis, although approximately one woman out of each eleven gave a strongly positive Wassermann reaction, indicating in all probability a syphilitic infection

**Potassium Mercuric Iodid Skin Disinfection.**—The results obtained by McKenna and Fisher in their experimental work show conclusively that solutions of potassium mercuric iodid or tincture of iodin in dilutions free from any harmful action, are efficacious in killing bacteria on and in the skin, and, therefore, must be considered as having a definite value in lessening the possibilities of bacterial infection in surgical operations as well as in the treatment of traumatic wounds. These experiments also show that potassium mercuric iodid, in a concentration of 1:100 in acetone, or in 70 per cent. alcoholic solution is more efficient for this purpose than is the official tincture of iodin. The greater penetration of the potassium mercuric iodid in acetone and the more rapid evaporation of this solvent make this solution the most desirable one for use. Furthermore, solutions of this double iodid do not stain, and produce no irritation or blistering of the

skin. In these respects, therefore, potassium mercuric iodid, in a strength of 1 per cent. in 70 per cent. alcohol—or better, in acetone—is preferable to iodin for disinfecting the skin.

**Relation Between Ulcer and Arterial Supply of Stomach.**—The investigation reported on by Reeves shows that the anatomic arrangements of the arteries along the lesser curvature of the stomach and throughout the first inch of the duodenum are such that the arteries are predisposed to thrombosis. The plexus of vessels in the submucosa on the lesser curvature is made up of much smaller and longer arteries without as free anastomoses as in other regions of the stomach. The branches from this plexus run a very tortuous course to enter the mucosa. The resistance offered the blood stream is constantly greater and, as a result, the blood current is slower as it enters the small arteries of the mucosa. The submucous plexus of arteries in the first inch of the duodenum is made up of relatively few vessels in comparison with other parts of the duodenum. They are small and do not anastomose freely; they give off branches to the mucosa some of which simulate the gastric type of spiral artery. The rather limited blood supply and the gastric type of artery predispose to thrombosis. Since the vessels are more liable to be occluded by emboli, it is reasonable to suppose that they are an important factor in the production of ulcer by hematogenous infections. Reeves submits the hypothesis that possibly slight deviation from the normal may contribute to peptic ulcer.

**Transplanting Uterus in Vesicovaginal Fistula.**—In the case reported by Dowman a most extensive vesico-utero-vaginal fistula resulted from the pressure of the child's head. She had been attended by a midwife who had allowed her to remain in labor for six days. A physician was then called and removed a dead child by means of forceps. Following this delivery the patient had a constant dripping of urine from the vagina, and no longer voided in the normal way. On examination, Dowman found complete destruction of almost the entire posterior wall of the bladder. This defect was filled in by making use of the uterus. The uterus was freed from all its attachments and was then placed in an extreme anteverted position so that the posterior wall of the fundus could be utilized as the posterior wall of the reconstructed bladder. That part of the bladder wall which was thus accessible through the abdominal opening was sutured to the posterior surface of the uterus by means of chromic catgut sutures, in such a manner as to bring the mucous membrane of the bladder in contact with and approximated to the peritoneal covering of the uterus. The patient was last seen six years after the operation and seemed healthy in all respects. Her bladder had given her no further trouble.

**Skin Grafting with Aid of Ethyl Chlorid.**—In the method used by Torrance, the thigh is shaved and cleaned with ether and alcohol; and an area on the top of the thigh about the size of a silver dollar is frozen and is cut out with a sharp razor just within the frozen area going well down into the fatty layer. The grafts are applied immediately to the granulation surface and when they become "thawed out" they will be found to be firmly glued to the granulation surface. They very rarely show a tendency to separate if the granulations are in good condition when the grafts are applied and if care is taken not to rub them off. A dry dressing is applied and is changed every day if there is any discharge from the surrounding granulations.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

### British Medical Journal, London

March 6, 1920, **1**, No. 3088

*Dyspeptic and Other Referred Symptoms Associated with Disease of Gallbladder and Appendix. H. Rolleston.—p. 317.
*Tumors Complicating Pregnancy, Labor, and Puerperium: Cancer of Uterus. H. R. Spencer.—p. 320.
Therapeutic Value of Oxygen in Pulmonary Lesions. J. C. Meakins.—p. 324.
*Cutaneous Manifestations in Case of Branchial Fistula. A. Eddowes.—p. 326.

**Referred Symptoms in Disease of Gallbladder and Appendix.**—The question how morbid changes in the gallbladder and appendix induce symptoms in other viscera and distant parts is gone into to some length by Rolleston, although nothing new is brought forward. The various mechanisms that may be at work in different cases are tabulated as (1) reflex, (2) mechanical, (3) toxic and (4) infective. Reflex: Irritation in the appendix or gallbladder may cause hypertonus of the stomach and spasm of, or failure to relax on the part of, the pyloric or ileocecal sphincter, leading to gastric or ileal stasis and so to excess of acid or to toxemia. Very often the appendix when removed shows little macroscopic change to correspond with the prominent symptoms that then disappear; microscopic examination may be necessary to reveal the evidence of past inflammation in its walls, especially fibrosis in the submucous coat, and often the changes are very slight. Mechanical: Pericholecystitic adhesions may embarrass the movements of the stomach, interfere with the passage of food through the pylorus, or even lead to an hour-glass stomach. Though often the legacy left by cholecystitis, these adhesions may be due to duodenal or gastric ulcer. Periappendicular adhesions may cause intestinal stasis and so toxemia, and the same result, only in a more marked degree, may be produced by an appendix adherent across the lower part of the ileum. Toxic: Absorption of bacterial toxins from the gallbladder or appendix may set up general toxemia, cause myocarditis, and damage the mucous membrane of the stomach and intestines, thus giving rise to hemorrhage. Infective: Micro-organisms from the appendix or gallbladder may infect the kidneys, especially the right. Infection of the gallbladder is prone to spread to the pancreas, and local thrombophlebitis of branches of the iliac veins, secondary to appendicitis, may give rise to small pulmonary emboli and pleurisy; malignant endocarditis has been found to be associated with gallbladder infection and with appendicitis. The differential diagnosis of appendix and gallbladder dyspepsia from gastric and duodenal ulcer presents considerable difficulties, but roentgen-ray bismuth or barium meal may give valuable assistance in differentiation. Other conditions mentioned as being caused by disease of the gallbladder and appendix are: chronic colitis; glycosuria and diabetes; cardiac symptoms; pyelitis and pyelonephritis; synovitis and arthritis.

**Cancer of Uterus and Pregnancy.**—Figures quoted by Spencer indicate that in the child-bearing period of life cancer not combined with pregnancy is at its maximum in patients over 40, but when combined with pregnancy, under 40; and that below 30 the frequency of cancer is six times as great in the pregnant as in the nonpregnant. Spencer's youngest patient was 26 years of age. He has had ten cases in all. Three patients are alive twenty-five, twenty-two and nineteen years after operation, respectively. Each one of the ten patients was a multipara.

**Skin Symptoms in Branchial Fistula.**—Falling of the hair of the scalp and eyebrows, some loss of eyelashes, skin dry and rather scaly were the cutaneous symptoms in Eddowes' case of branchial fistula. The patient's grandmother had a similar condition.

### Edinburgh Medical Journal

March, 1920, **24**, No. 3

*Treatment of Fracture of Mandible. W. Guy.—p. 138.
Transfusion of Blood for Hemorrhage. J. M. Graham.—p. 142.
Artificial Rotation of Head in Persistent Occipito-Posterior Positions. J. L. Lackie.—p. 168.
Tuberculosis in One Division of English Navy. C. J. Campbell.—p. 173.
Case of Diffuse Hypertrophy of Breasts. B. S. Simpson.—p. 176.

**Treatment of Fracture of Mandible.**—Guy maintains that in the vast majority of cases of fractured mandible, immobilization is not only not necessary, but inadvisable, or even prejudicial to a successful issue. The aim of treatment should be reestablishment of function at the earliest possible moment. It is of importance that the fracture should at the termination of treatment be united; it is of still greater importance that the patient should have a lower jaw which is functional, which, in short, he can use. Immobilization in many instances defeats the attainment of this result.

## Japan Medical World, Tokyo

Feb. 28, 1920, **10**, No. 9

Anthropometry of Civilized Man. Arthur MacDonald.—p. 185.
Action of Epinephrin and Hydrochloric Acid Against Tetanus Toxin. R. Kobayashi.—p. 185.
Toxin and Antitoxin of Bacillus Influenzae. Y. Watanabe.—p. 186.

## Lancet, London

March 20, 1920, **1**, No. 5038

Hunter, Gaskell and Evolution of Nervous System. W. L. Brown. —p. 641.
*Heat Hyperpyrexia. W. H. Willcox.—p. 648.
*Syphilis at a Venereal Clinic. E. F. Skinner.—p. 650.
*Later History of Four Cases of Total Laryngectomy for Malignant Growths. C. Symonds.—p. 652.
*Intravenous Injection of Tartar Emetic in Guinea-Worm Infections. J. W. S. Macfie.—p. 654.
Case of Abnormal Descent of Testicle. J. A. C. Macewen.—p. 655.
*Syphilitic Spondylitis: Negative Wassermann Reaction. S. C. Evans and C. F. Marshall.—p. 656.

**Heat Hyperpyrexia.**—Cases of illness due to exposure to high atmospheric temperature are analyzed by Willcox. The clinical types were: (1) heat exhaustion (mild type); (2) gastric type; (3) choleraic or gastro-intestinal type; (4) heat hyperpyrexia (sunstroke). In types 1, 2 and 3 heat hyperpyrexia may suddenly develop unless great care be taken in the removal of patients from a hot atmosphere. Types 2, 3 and 4 are all dangerous, and in them the prognosis is grave. Of eighty severe cases of effects of heat, thirteen (16.2 per cent.) were of the gastric type, nine (11.2 per cent.) of the choleraic, and fifty-eight (72.5 per cent.) were hyperpyrexial. The onset was often quite sudden. Heat hyperpyrexia frequently occurred in the very hot weather in hospital patients suffering from another disease. In them the temperature would often suddenly rise to 110 F., coma and convulsions supervening. Frequency of micturition is a characteristic early symptom, and is sometimes associated with urethral pain. The temperature is somewhat raised, from 100 to 102 F. or so, and the skin is hot and dry. These preliminary symptoms usually last for a few hours, sometimes as long as forty-eight, after which mental excitement and delirium supervene and the temperature rapidly rises to about 110 F. Marked cardiac dilatation, often associated with a systolic murmur, occurs in the severe cases. On examining the urine, indican was found present in excess in all of six acute cases in which a special examination was made. Acetone and diacetic acid were found present in small amount in one out of eight acute cases specially tested. Albumin was detected in small amount in three out of eight acute cases. No casts were seen. Of nervous symptoms, restlessness and delirium occur with the onset of hyperpyrexia, and are quickly followed by stupor and coma, with incontinence of urine and feces. Muscular twitching and convulsions are very common with the high temperature. The knee-jerk is almost always absent in the pure heat-stroke cases during the acute stage. In severe cases the knee-jerk does not return for three or four weeks, in milder cases it returns earlier. The presence of knee-jerks is a valuable prognostic sign, for when they have returned there appears to be much less risk of a relapse, and the patient may then be evacuated with safety. Many of the severe cases after the hyperpyrexia has subsided show a pyrexia, the temperature remaining for several days about 102 or 103 F. For the gastric type of case removal to a cool atmosphere, sodium bicarbonate in frequent full doses by the mouth, and free purgation give the best results. The choleraic type of case is treated on similar lines to cholera. Heat hyperpyrexia demands treatment with sprays of ice-cold water and fans, quinin dihydrochlorid being given intravenously or intramuscularly if there is the slightest suspicion of malaria. Convulsions are treated by venesection, or morphin or chloroform inhalations.

**Syphilis in Women.**—Skinner presents his analysis of 354 cases of syphilis seen in the course of one year. A few observations are specially emphasized. For instance primary cases are still in a grave minority of admissions. Women do not seek advice in the primary stage, and steps should be taken to disseminate knowledge of the dangers of venereal disease and the advantages of the clinics amongst the female population. Continuity of treatment is essential for cure, and discontinuity a possible danger. Only where treatment is commenced before the Wassermann reaction has become positive can a cure be definitely promised.

**Results of Laryngectomy for Cancer.**—Symonds' patients have lived in comfort and happiness, and done useful work for eight, twelve, fifteen and a half, and twenty-two years, respectively. One patient died of old age; here was the most extensive of all the operations.

**Tartar Emetic in Guinea-Worm Infections**—Ten cases of guinea-worm infection in various stages were treated by Macfie at Accra by means of intravenous injections of tartar emetic. In five of the ten cases the whole guinea-worm was still in the body at the time when treatment was begun. In two, the sore healed under treatment and the worm did not come away; one of these patients was seen a month and one a week after the cessation of treatment, and appeared to be cured. In one, part of the worm was pulled out and broken off during treatment; this case, nevertheless, did well and was apparently cured. In one the sore closed temporarily, but reopened, and the worm was eventually wound out. One was lost sight of at an early stage. In five of the cases part of the guinea-worm had been pulled out and broken off before treatment was begun; all these cases showed signs of acute inflammation of the affected limb. The inflammation subsided and the guinea-worm sore healed in three of these cases, the portions of the worm which had not been pulled out remaining in the body but causing no inconvenience. One was complicated by the presence of a suppurating wound, so that the effect of treatment was not clear. And one was lost sight of at an early stage. In all but one of the cases treated intravenous injections of tartar emetic, even in the small doses given (3.5 to 9 grams), appeared to have a beneficial action. They appeared to relieve the inflammation caused by the breaking of the worm, to effect the healing of the sore without the previous removal of the worm, and to shorten the duration of the affection. In most of the cases it was impossible to continue the injections as long as had been intended, either because the patients had left Accra or because they themselves had concluded, perhaps prematurely, that they were cured and in no need of further treatment. In the cases which were longest under observation it appeared as if the antimony had killed the guinea-worm in the body and allowed it to be absorbed.

**Syphilitic Spondylitis.**—The case Evans and Marshall report resembles Fournier's in affecting the same vertebrae, but differs in the absence of cavitation of the vertebrae, abscess formation, and muscular atrophy. The process of new bone formation predominated over bony destruction. This is characteristic of most cases of syphilitic spondylitis and distinguished them from tuberculous disease. Noteworthy features of this case are the rarity of the lesion, its occurrence in spite of treatment, and the persistently negative Wassermann reaction, the first test being made when the vertebral lesions were in active development. This case would therefore appear to serve as a warning against placing too much reliance on the Wassermann reaction, both as regards diagnosis and prognosis.

## Medical Journal of South Africa, Johannesburg

January, 1920, **15**, No. 6

Experimental Determination of Vertebrate Hosts of Some South African Cercariae from the Mollusks Physopsis Africana and Limnaea Natalensis. A. Porter.—p. 128.
Injury to Eye by Contents of Golf Ball. R. C. J. Meyer.—p. 133.
Case of Purpura Hemorrhagica. J. J. Levin.—p. 135.

## South Africa Medical Record, Cape Town

Feb. 28, 1920, **18**, No. 4

Some Impressions of Surgical Work in France. H. A. Moffat.—p. 63.
Some Cases of Encephalitis (Lethargic?). H. A. Loeser.—p. 66.
Surgical Treatment of Cancer of Uterine Cervix; Nineteen Cases. R. Sharp.—p. 68.
*Case of Rupture of Bladder. L. Gordon.—p. 72.
Case of Convulsions in a Child, Lasting 24 Hours and Terminating Fatally. C. Sand.—p. 73.

**Traumatic Rupture of Bladder.**—An unusual feature in Gordon's case, one of traumatic intraperitoneal rupture of the bladder was the obtaining of urine in considerable quan-

tities after catheterizing the patient. The patient had been kicked on the lower abdomen. The house surgeon, suspecting an injury to the bladder, passed a catheter and obtained about 10 ounces of blood-stained urine. Eight hours later 16 ounces of urine were drawn off. The bladder was washed out with boric solution, the amount of solution returned being apparently the same in quantity as was injected. About thirty-six hours later Gordon saw the patient. He suspected an intraperitoneal rupture of the bladder, but as the chief sign in these cases, that with the inability to urinate no urine is obtained on catheterization, was absent, the diagnosis seemed unlikely; still, it was made, and it appeared probable there was a laceration involving the inner coats chiefly with a small leak setting up peritoneal irritation. On opening the abdomen, the peritoneal cavity was found to contain urine, and a large tear the size of a half-crown piece, circular and ragged in outline, was discovered on the posterior wall of the bladder, an inch above the trigone, immediately behind and in line with the urethra. The bladder contained no urine. The conclusion was that on each occasion the catheter had been passed, the point had passed through the rent in the bladder wall and had tapped the urine from the peritoneal cavity. The laceration was closed. The point which seems emphasized in this case is that the possibility of a rupture of the bladder when urine is returned in large quantities after a catheter is passed must not be ignored, and further, that the diagnostic method of injecting a measured quantity of fluid into the bladder and observing the quantity returned cannot always give helpful information.

## Bulletin de l'Académie de Médecine, Paris

Feb. 10, 1920, **83**, No. 6

*Fever Whips Up the Kidneys. G. Etienne and R. Druesne.—p. 127.
*The Schick Diphtherin Reaction. J. Renault.—p. 130.
Is Ambidexterity Desirable? F. Regnault.—p. 132.

**Kidney Functioning During Fever.**—Etienne and Druesne found an unusually low ureosecretory index by the Ambard formula in 43 febrile patients with pneumonia, typhoid, acute rheumatism, tuberculosis or other disease. The output of urine was satisfactory and the kidneys were presumably normal in all but 5. The Ambard constant was within normal range only in 6, but in the 5 with diseased kidneys, the constant was much above the normal. With sound kidneys, the urea content of the blood was normal. These and other findings testify that the fever whips up the kidneys to extra functioning, just as it whips up the heart and the lungs to a more rapid rate. The acceleration of the heart beat drives the blood faster through the kidneys, and they eliminate waste faster and more thoroughly as long as they are adequate to the task. When they fail, or when the kidneys become too congested to keep up the work, then the Ambard constant runs up. Their figures show that the fever may whip up the kidneys to accomplish 200 per cent. of their former work.

**The Schick Diphtherin Reaction.**—Renault reports application of the Schick test to 281 children during a recent epidemic of diphtheria. None of those giving a negative reaction contracted the disease. Those with a positive reaction did not always develop the disease, even when diphtheria bacilli were found in the throat. The Schick test does not preclude the search for carriers, as children in both the positive and negative groups may be carriers.

## Bulletin Médical, Paris

Feb. 28, 1920, **34**, No. 12

*Confusional Mental States: The Toxic-Infectious. A. Delmas and H. Beaudouin.—p. 189; The Post-Traumatic. P. Juquelier.—p. 193; Accompanying Psychoses, Neuroses and Organic Nervous Disease. L. Marchand and A. Barbé.—p. 197; Treatment. J. Roubinovitch and R. Dupouy.—p. 201.

March 6, 1920, **34**, No. 13

The Humoral Reactions with Vaccination and Their Connection with Allergy. P. Gastinel.—p. 219.

**Confusional Mental States.**—This entire issue of the *Bulletin* is devoted to this subject. The first article describes the toxic-infectious types. Headache is the capital symptom; insomnia, tremor, contractures, digestive and urinary disturbance and low blood pressure are also suggestive. Juquelier discusses posttraumatic mental confusion. Usually it entails gaps in the memory and grooves in the nails showing the nutritional upset. Marchand and Barbé discuss confusional states in relation to psychoses, neuroses and organic disease of the nervous system. Roubinovitch and Dupouy review the field of treatment with special regard to the heart and the general condition, and organotherapy as indicated. Experiments on cats have demonstrated the gravity of thyroid insufficiency in gravid animals, and this is confirmed by the benefit from thyroid treatment in pregnancy disturbances. It may be useful also as preliminary to ovarian treatment at the menopause, at puberty and during lactation. Symptomatic measures alone are not enough; the cause of the confusional condition must be discovered, and during convalescence psychotherapy is indispensable to aid in restoring mental balance.

## Bulletins de la Société Médicale des Hôpitaux, Paris

Jan. 30, 1920, **44**, No. 4

Myoclonic Epidemic Encephalitis. Sicard and Kudelski.—p. 121; Idem with Paresis.—p. 123.
*Ascending Myoclonus. P. Carnot and C. Gardin.—p. 125.
*Paget's Disease of Bone. De Massary and Lechelle.—p. 134.
*Congenital Cyanosis. Variot and Bouquier.—p. 137.
*Rupture of Abdominal Aorta. E. Dubot and others.—p. 143.
*Herpes Zoster of the Ear. A. Souques.—p. 146.
Typhoid Meningitis. G. Laroche and Peju.—p. 150.
*Polyglandular Syndrome with Tardy Epilepsy. G. Etienne and G. Richard.—p. 154.
Primary Tricuspid Endocarditis. Rémond and Minvielle.—p. 158.
Amyotrophy with Abnormal Course. A. Rémond.—p. 159.

**Ascending Myoclonia.**—Carnot and Gardin found lesions in the nerve cells of the cortex and medulla and thrombosis of the veins in the meninges at necropsy of a young man who died the seventeeth day after the onset of ascending paramyoclonus. It started in the legs and spread up to the abdomen, arms and face, with fever and delirium. They also report a case of acute chorea in a young woman, five months pregnant, with a purpuric eruption and slight fever, with death in less than a week. They do not know how to class these two cases, but incline to label them influenza. Oettinger recalled that during the 1889-1890 epidemic of influenza, Leyden and Guttmann reported some cases with narcolepsy (*schlafsucht*) with a fatal outcome in some of the cases. In the discussion that followed, Sainton recalled Dubini's description in 1846 of what he called electric chorea. The description fits some of these cases of epidemic encephalitis. The jerking of the muscles, he said, is like that from an electric current, and it may be accompanied with paralysis or atony of the muscles innervated by the radialis. In Dubini's description of his thirty-six cases of epidemic electric chorea, there is no reference to any other forms characterized by somnolency.

**Paget's Disease of the Bone.**—The disease was restricted to one femur and developed at the age of 45.

**Congenital Cyanosis.**—Variot and Bouquier state that within a recent ten days four newly born infants with congenital cyanosis died when they were from 10 to 15 days old, and necropsy showed a widely patent arterial canal with congestion of the lungs and emphysema, as with death from asphyxia.

**Spontaneous Rupture of Abdominal Aorta.**—The rupture occurred in consequence of acute insufficiency of the kidney in a syphilitic man of 32, after recovery from a long suppurating war wound compelling amputation.

**Herpes Zoster of the Ear.**—The herpes zoster involved the outer ear and front part of the tongue, and there were also facial paralysis and deafness—the whole forming what may be called the syndrome of the geniculate ganglion.

**Polyglandular Syndrome with Tardy Epilepsy.**—Etienne and Richard report a third case in which symptoms of endocrine insufficiency accompanied epilepsy developing after 20 or 30, and in which notable improvement was realized under thyroid plus ovarian treatment. The seizures stopped at once after this organotherapy was begun and pushed, although there were certain equivalents at each menstrual period for two or three months The phenomena in the case confirmed

the assumption that the brain disturbance was of vascular origin, spasm of the arteries explaining the symptoms, and this could be traced to insufficient functioning of both the thyroid and ovaries.

## Journal de Médecine de Bordeaux

March 10, 1920, **91**, No. 5

*Subarachnoid Meningeal Hemorrhage. P. Mauriac and E. Ferré. —p. 111.
Gas Phlegmon in Abdominal Wall Containing Needle Migrating from Intestine. R. Villar.—p. 114.
Anomalies of Arteries of the Kidney. G. Jeanneney and L. Massé. —p. 117.
Management of Watering Places. Cornet.—p. 120.

**Subarachnoid Meningeal Hemorrhage.**—In one of three cases described—all in young men—no cause for the sudden meningeal hemorrhage could be discovered, and after blood had been released by lumbar puncture, recovery was complete in two weeks. In the second case the hemorrhage followed the pulling of several teeth. The third case was diagnosed as uremia with convulsions, as the urine contained albumin. But lumbar puncture revealed the hemorrhage. Complete recovery followed in each case. The writers warn that too much fluid must not be released at one time by lumbar puncture, or the hemorrhage may be started anew.

## Lyon Chirurgical

September-October, 1919, **16**, No. 5

*Volvulus of the Sigmoid Flexure. R. Ingebrigtsen.—p. 469.
*Traumatic Shock. J. Bosquette and P. Moulonguet.—p. 478.
*Recent Fractures of Neck of Femur. P. Santy.—p. 495.
*Pseudocoxalgia in Relation to Phimosis. J. Veyrassat.—p. 513.
*Intermittent Ascent and Descent of Testicle. J. Murard.—p. 519.
*Umbilical Ecchymosis a Symptom of Wounds of Liver. P. Bonnet.—p. 524.
*Resection of Scapula in Treatment of Fistulas. Bosquette.—p. 527.
*Causalgia. R. Leriche.—p. 531.

**Volvulus of the Sigmoid Flexure.**—As the preferable treatment for volvulus of the sigmoid flexure, Ingebrigtsen recommends resection of the loop as this, he says, is the only means to prevent recurrence. If the intestine is no longer viable, resection is the only recourse. Resection in two stages is the procedure recommended if the intestine has not sufficient vitality for an operation at one sitting, for in that case the general condition of the patient will be bad. As the first step, an artificial anus is made, which is closed later. This is done even though the sigmoid flexure does not show signs of gangrene. Primary enterorrhaphy follows the resection if the general condition of the patient permits.

**Clinical Notes on Traumatic Shock.**—Bosquette and Moulonguet confess to their inability to explain the origin of shock, but they have reached some definite conclusions in regard to it. They regard shock as a morbid entity. Its evolution is independent of the nature of the wounds received, and also of infectious complications and surgical intervention. When it passes off, the change is brought about suddenly and is not ordinarily associated with any event in the history of the case nor with any form of medication. The prognosis in shock cases is less favorable if a tourniquet has been applied for a long time, but there is no evident relation between the type of wound and the shock that may or may not accompany it: both legs may be crushed without any sign of shock. It seems as if there must be some individual predisposition to shock as the intangible factor common to so many unlike cases.

**Delbet Treatment of Recent Fractures of Neck of Femur.**—Santy, desiring to try Delbet's method of treating fractures of the neck of the femur (which consists essentially in first reducing the fracture as perfectly as possible and then passing a metal screw through the greater trochanter and lengthwise through the neck into the head of the femur), but not having at hand the special instruments recommended by Delbet, decided to use such simple tools as he had at hand. With these he was able to perform the operation in a satisfactory manner. He describes his simplified technic, thinking thus to encourage others who are not supplied with special instruments to try the Delbet method. He bored the hole for the screw with an ordinary gimlet, 10 cm. long, and used an ordinary screw from 8 to 10 cm. long and 6 mm. average diameter. He gives roentgenograms from seven cases.

**Pseudocoxalgia in Relation to Phimosis.**—Confirming the conclusions of Adams (THE JOURNAL, June 4, 1887, p. 631) and Reverdin, Veyrassat cites a case of his own to show that intermittent coxalgia and pseudocoxalgia may be associated with phimosis, and that circumcision will relieve the trouble, just as it often does hysteria and neurasthenia.

**Sudden, Intermittent, Abdominal Migration of the Testicle.**—Murard reports what he regards as a rare case of migration of the testicle; in fact, he has been able to find in the literature only one analogous case, that of Sébileau and Descomps. A boy, aged 14, after a hard day's work, although characterized by no violent effort, suddenly felt a severe pain in the region of the left groin. The pain was so severe that he almost lost consciousness. Then he noticed that the left testicle had disappeared. After five days it reappeared in place, and this was accompanied by the same severe pain as before. This continued to occur about every month, the testicle remaining away for about five days. Sudden and severe pain always accompanied its coming and going. The patient presented himself at the hospital at the age of 16. The last attack had occurred two weeks previously, but since then the testicle had not reappeared as usual, except for half a day. The testicle could not be palpated and an incision was made lengthwise of the inguinal canal. The cord was in place, but there was no testicle at its extremity. While the palpating finger was searching in vain for the testicle, the traction on the cord caused it to suddenly emerge from a sac formed by the vaginalis and peritoneum. The testicle was found to have no ligament attaching it to the scrotum or the neighboring parts. It was of normal size, though it had no epididymis. The vas deferens terminated a little below the inguinal ring. With the idea of attempting an anastomosis, the vas deferens was cut into at three different points, but was found to be impermeable, for which reason it was decided to perform orchidopexy, which was done by the Walther method. Murard left this service two days later, and while he heard a month later that the fixation had held, he is unable to give further details of the end-result.

**Umbilical Ecchymosis as a Symptom of Wounds of Liver.**—Bonnet reports a case of thoraco-abdominal injury, associated with wounds of the lung and the convex surface of the liver, in which an ecchymosis in the upper half of the umbilicus appeared, as a secondary symptom of the injury of the liver. He offers the case as a contribution to the study of the symptomatic influence of wounds of the convex surface of the liver affecting the suspensory ligament.

**Resection of the Scapula in Treatment of Thoracic Fistulas.**—Bosquette thinks that partial resection of the scapula should be regarded as the routine treatment in certain cases of thoracic fistula. If a thoracic fistula does not yield readily to treatment, there is a lesion at the base of the tract or there is a foreign body keeping up the suppuration. Accordingly, a cure will be effected by the suppression of the causal lesion if the walls of the tract are not so rigid and immobile as to prevent approximation. In the latter case Bosquette recommends resection of the scapula as very efficacious and points out two advantages of the method: it suppresses a rigid portion of the wall which maintains a dead space and constant suppuration, and, furthermore, it furnishes in the muscle and periosteum strips that are thereby liberated, very useful plastic material for the filling in of gaping wounds. There are two principal indications for the resection of the scapula: (1) when it forms the rigid roof of an intercostoscapular bullet track, and (2) when the scapula extends like a cliff over one of the borders of the fistulous wound and thus prevents the walls of the fistulous tract from coming together.

**Causalgia.**—Leriche remarks that causalgia was born with the war and is disappearing with it. As Weir Mitchell pointed out, the atrocious pain finally subsides in all cases. Leriche here explains the causes, the mechanism, and the technic for curing this vasomotor disturbance by perivascular sympathectomy, as repeatedly described in these columns.

## Lyon Médical

Feb. 25, 1920, **129**, No. 4

Citrate Method of Blood Transfusion. Murard and Wertheimer.—p. 161.

## Médecine, Paris

February, 1920, **1**, No. 5

French Neurology of the Last Five Years. Laignel-Lavastine.—p. 261.
*Motor Disturbances After Influenza and Epidemic Encephalitis. P. Marie and G. Lévy.—p. 270.
Loss of Tendon Reflexes after Skull Wounds. A. Souques.—p. 274.
*Neuralgia Persisting After Herpes Zoster. J. A. Sicard.—p. 278.
*The Pilomotor Reflex. A. Thomas.—p. 283.
*Epilepsy and Syphilis. L. Babonneix.—p. 286.
*Signs of Sciatica. G. Roussy and L. Cornil.—p. 290.
Diagnosis and Surgery for Spinal Cord Tumors. T. de Martel.—p. 292.
Toxic Factors in Psychoses. A. Barbé.—p. 297.
Nervous and Mental Complications of Influenza. P. Courbon.—p. 301.
*Atechnia. Laignel-Lavastine.—p. 303.
*Arsphenamin in General Paresis. Laignel-Lavastine.—p. 309.
The General Practitioner and the Insane. P. Courbon.—p.309.

**Motor Disturbances Following Influenza and Epidemic Encephalitis.**—Marie and Lévy have encountered since the fall of 1918 a number of cases with involuntary movements, choreiform or rhythmic swaying of the limbs or trunk, or tremor, or masklike expression, or twisting of the trunk interrupting the gait. The patients were all comparatively young, and all but one had passed through a febrile disease, presumably influenza or epidemic encephalitis, from two to two and a half months before. In all, the motor phenomena gradually became attenuated in the course of a year, but never disappeared completely. In one case the slowness and stiffness of motion seem to be increasing. These motor phenomena, they say, do not fit into the frame of any known disease.

**Neuralgia After Herpes Zoster.**—Sicard explains that lymphocytosis in the spinal fluid is often found after herpes zoster, and it testifies to the reaction on the part of the ganglia, nerve roots and meninges in the region involved, as has been confirmed at necropsy. This segment is the cross-road where the pains meet, and in certain cases the pains pass into a chronic stage, and operative treatment offers the only chance for success. His experiences on the cadaver seem to show that traction to tear out the nerve (Franke), is useless and dangerous; severing the posterior root alone (Guleke), is liable to entail motor paralysis. Sicard prefers excision of the spinal ganglion and resection of the two adjacent posterior and anterior roots. The ligature includes both roots between the dura and the ganglion, and then the ganglion is torn out. This gangliectomy has to be repeated on four segments of roots. This extradural procedure causes comparatively little trauma, and is all under direct inspection. Intradural section of the posterior roots entails loss of spinal fluid. He applied this latter method also in two cases, successfully in one, but the other patient died. In three cases the extradural gangliectomy cured two of the patients immediately, but the pains persisted in the other case. One patient with chronic neuralgia after herpes zoster, involving the ophthalmic and superior maxillary nerves, died after gasserectomy.

**The Pilomotor Reflex.**—Thomas explains the difference between the goose-flesh reflex and the pilomotor reflex, and their diagnostic importance as evidence of functioning of the sympathetic system.

**Treatment of Epilepsy.**—Babonneix says "Cherchez l'hérédo-syphilis" in epileptics and, on the least suspicion of it, give specific treatment at once, striking hard and fast and perseveringly. "When syphilis is a factor, anything is possible, even the impossible, sometimes."

**Motor Signs of Sciatica.**—Roussy warns that true sciatica may be accompanied by inability to bend the trunk toward the side of the lesion as the patient stands. Another test is to flex suddenly the foot on the leg, the limb extended to the utmost. As this stretches the nerve and induces pain, the nerve is drawn up, flexing the thigh on the pelvis, the leg at the knee. The sharpest pain with this is felt in the calf or back of the thigh. A similar effect is realized when the tip of the foot is twisted inward, a rotation on the anterior posterior axis of the foot. This induces such pain that the patient usually flexes the limb. These three tests have proved instructive in the three years of experience with neuralgia after war wounds involving the sciatic.

**Loss of Technical Skill.**—To express this, Laignel-Lavastine has coined the term "atechnia," meaning by this loss of the skill acquired by training in any line. It includes aphasia, amusia, apraxia and similar conditions of acquired incapacity.

**Arsenic in General Paresis.**—Laignel-Lavastine asserts that as paresis is supposed to be incurable, we are justified in attacking it vigorously, but treatment should begin before the phase of actual dementia is reached. He advises arsphenamin treatment to ward it off if the characteristic meningeal reaction is evident four years after the primary infection. The lumbar puncture fluid reveals in this that the individual is a candidate for paretic dementia long before any clinical symptoms become manifest, and vigorous treatment then offers many chances for permanently warding it off.

## Paris Médical

Feb. 21, 1920, **10**, No. 8

*Technic for Operations on Diaphragm Region. A. Schwartz and J. Quénu.—p. 149.
*Epidemic Hemeralopia. R. Tricoire.—p. 152.
*Adhesion of the Soft Palate. J. Rouget.—p. 155.
Amebiasis of the Liver. P. Hornus.—p. 157.
Streptococci in War Wounds. P. Pruvost.—p. 159.

**Operations in Diaphragm Region.**—Schwartz and Quénu give a further illustrated description of what they call a thoraco-phreno-laparotomy, the main features of which were summarized in an abstract on page 1315, Oct. 25, 1919. They expatiate on the ample access it affords to the spleen and to all organs in the hypochondrium, the cardia, ligation of the coronaries, etc.

**Epidemic Hemeralopia.**—Tricoire encountered 320 cases of night blindness among soldiers. He ascribes it to lack of vitamins, as all the men threw it off promptly under cod liver oil.

**Adherent Palate.**—Rouget reports three cases of adhesion of the soft palate to the pharynx wall after an operation for adenoids or tonsils. The parents are inclined to incriminate the surgeon, but Rouget presents evidence that inherited syphilis is probably responsible for the postoperative conditions which entailed the synechia. In two of the cases described the Wassermann reaction was positive, and the third child had a brother with iridochoroiditis. Marfan regards inherited syphilis as the cause of adenoids in the majority of cases.

## Presse Médicale, Paris

Feb. 21, 1920, **28**, No. 15

Mode of Reaction of Blood to Extravascular Causes for Loss of Balance. A. Pruche.—p. 141.
*Lengthening the Achilles Tendon. R. Toupet.—p. 143.

**To Lengthen the Achilles Tendon.**—Toupet slits the tendon lengthwise from side to side and cuts the flaps across so that they overlap. The tendon flaps are then slipped along on each other until the tendon is of the desired length. Nine illustrations accompany the article.

## Progrès Médical, Paris

Feb. 14, 1920, **35**, No. 7

*Mechanism of Acute Retention of Prostatic Origin. F. Legueu.—p. 67.
Familial Psychosis in Native Congo Family. E. Terrien and R. Saquet.—p. 72.

**Acute Retention of Urine of Prostatic Origin.**—Legueu presents evidence that the retention with hypertrophied prostate is due more to nervous influences on the sphincter than to the size of the prostate.

Feb. 21, 1920, **35**, No. 8

*Chronic Inflammation of the Omentum. A. Aimes.—p. 79.
Angina Pectoris. Chauffard.—p. 83.

**Chronic Inflammation of the Omentum.**—Aimes emphasizes the importance of seeking for epiploitis in all inflammatory processes in the abdomen. It may even simulate cancer by the debility and emaciation it may induce and the immobility of the inflamed mass. Bakes resected the adherent transverse colon in one case which proved to be merely an inflammatory tumor that had developed around three ligature threads. The posterior aspect of the omentum should be examined at operations, and all damaged portions should be resected.

## Revue Médicale de la Suisse Romande, Geneva

February, 1920, **40**, No. 2

*Care of the Feet. Roux.—p. 61.
Exploration of Stomach Functioning. E. Cottin and M. C. Saloz.—p. 83. Cont'n.
Prophylaxis of Venereal Disease. Ch. Morin.—p. 92.
Legislation Against Alcohol. H. Preisig.—p. 104.
Hypothyroidism in Course of Tuberculosis. T. Stephani.—p. 108.
Partial Resection of Cervical Sympathetic for Right Hyperhidrosis. A. Kotzareff.—p. 111.

**Care of the Feet.**—Roux implanted a piece of fat, about 0.5 cm. thick, under the head of the fifth metatarsal bone through a lateral incision, and thus cured the pains resulting from the lack of the normal cushion of tissues at this point. In another case, after correcting hallux valgus, he implanted a pad of fat under the head of each first metatarsal bone. The fat was taken from the lumbar region. The woman had long been hobbling on account of pains from her feet, but these procedures restored clinically normal conditions persisting during the year to date. He says of high heels that a foot pointing downward from a nearly 4-inch heel forces the big toe into the tip of the shoe, and the foot rests exclusively on the heads of the metatarsal bones. The wearer is thus preparing for herself hallux valgus and pain under the heads of the metatarsal bones, all of which may be aggravated by arthritis, exostosis or bursitis. Correction of these conditions requires an operation and tedious treatment, and the correction persists only if the precautions are taken which should have been taken in the beginning. The various operative methods are analyzed. "Their results demonstrate," he says, "the wisdom of avoiding hallux valgus." The steep streets of his Swiss city seem to be particularly injurious in this respect. He adds that the interned soldiers, "walking with their feet parallel, using all their ten toes, have taught the advantages of the American army shoe. It would be perfect if it were not so ugly—*disgracieux à faire retourner les passants.* . . . By Americanizing the Swiss shoe, planting the feet parallel, and using all the toes in walking, we can ward off flat foot, pain under the heads of the metatarsal bones, hallux valgus, and the surgeon—all at one stroke."

## Schweizerische medizinische Wochenschrift, Basel

Feb. 26, 1920, **50**, No. 9

*Silver Sodium Salvarsan. O. Nägeli.—p. 161.
*The So-Called Epicondylitis Humeri. J. Dubs. Cone'd in No. 10, page 187.
Testing Vision for Railway Service. A. Erb.—p. 169.

**Silver Sodium Salvarsan.**—Nägeli has injected this drug 800 times and regards it as progress in the treatment of syphilis. The first batch he received induced by-effects of an angioneurotic character more frequently than with neoarsphenamin, but with later batches these disturbances were less pronounced and less frequent.

**Epicondylitis Humeri.**—Dubs' analysis of the literature and personal experience with nine cases have confirmed that tennis elbow and the Vulliet-Franke epicondylitis humeri are identical. It develops after athletic or industrial use of the elbow or a single trauma of the epicondyle. But, in both conditions, the trouble is in the capsule of the elbow joint, not in the epicondyle itself. The course is usually over several months, refractory to treatment, but final recovery is the rule.

March 4, 1920, **50**, No. 10

Prevention of Roentgen-Ray Injuries. H. Hopf.—p. 181; Idem. E. Wölffin.—p. 186.
The Railroad Medical Service. J. Michalski.—p. 191.

March 11, 1920, **50**, No. 11

*Epidemic Encephalomyelitis. R. Stähelin.—p. 201; Idem. H. Reich.—p. 207.
Goiter in Relation to Height. H. Hunziker.—p. 209.
*Epilepsy and Inherited Anosmia. M. Alikhan.—p. 211.

**Epidemic Encephalomyelitis.**—Stähelin insists that this is the proper name for what is being called lethargic encephalitis, as the pathologic anatomic findings are the same in all cases while the clinical manifestations may differ widely. In some of his seventeen cases the necropsy findings first cleared up the diagnosis, the symptoms having been rudimentary or atypical. In some cases they seemed to indicate cerebral hemorrhage. In four cases the epidemic encephalomyelitis was confirmed by necropsy, but in each it had developed consecutive to influenza, and necropsy revealed accompanying lesions of influenzal pneumonia. From the records to date it seems that about 33 per cent. of the typical severe cases terminate fatally and numerous others are left with chronic sequelae. He does not know of any convincing testimony on treatment with hexamethylenamin, iodin or lumbar puncture, or as to transmission of the disease by direct contact or by carriers.

Reich says that the disease seems to be appearing all over Switzerland and reports ten cases personally studied. Necropsy in one showed besides the typical lesions of the epidemic encephalomyelitis, findings in the lungs such as are typical of the hemorrhagic lobular influenzal pneumonia. One lad of 17 developed the disease two days after his father.

**Anosmia and Epilepsy.**—Alikhan gives the tree of a family of thirty members in four generations, eleven of whom have no sense of smell and four very little, while two members of the later generation are epileptics. The anosmia was transmitted through the women, none of the male descendants having married. The transmission occurred the same through the descendants from a second marriage of the great grandmother. This connection between anosmia and epilepsy should suggest study of the hippocampus major in epileptics and in those with anosmia.

## Chirurgia degli Organi di Movimento, Bologna

February, 1920, **4**, No. 1

*Arthrodesis of Shoulder. G. Serafini.—p. 1.
*Lesions of Sesamoid Bone of Big Toe. G. Serafini.—p. 7.
*Radial Neuritis. G. Vernoni.—p. 29.
Recurring Radial Paralysis. V. Putti.—p. 45.
*Motor Plastic Operations: Cinematization. L. Scalone.—p. 50.
*Rotary Movements in Cinematization. V. Putti.—p. 65.
Huge Lymphangioma of the Thigh. G. Pirotti.—p. 87.
Reconstruction of Crucial Ligaments. V. Putti.—p. 96.
Glue in Artificial Limbs. A. Landini.—p. 102.
*The Anatomic Artificial Leg. C. Ghillini.—p. 121.

**Arthrodesis of the Shoulder.**—The paralysis of the arm, of spinal origin, in the eight months' infant was followed by spontaneous fracture of the humerus about two years later, and the arm hung limp. Serafini describes the operation with two wire sutures which restored the use of the arm to a certain extent, although the humerus is still elastic and frail. Functional use will correct this, it is hoped.

**Trauma of Sesamoid Bone of Big Toe.**—Serafini has encountered two cases and summarizes from the literature twenty-two cases of alleged fracture and three of lateral dislocation, and refers to the many cases of inflammatory lesions in the sesamoid bone of the big toe. In his own cases the bone had fractured during a long march or from a fall, and a complete cure followed its removal in one case; improvement is progressing in the other under medical measures.

**Radial Neuritis.**—The girl was healthy until, at 13, right radial paralysis developed, without pain. It subsided under the usual measures in three months, but bluish patches were noticed on the arm afterward for some time. A year later the paralysis returned as also the purpura in the radial territory. No relief was obtained by any measures, and after three months there was intense pain in the upper arm. A large bluish patch ulcerated, and the disturbances kept up until the radial trunk was exposed and adhesions separated, physiologic saline injected around the nerve, and the nerve wrapped in a segment of artery from a dog. A few months

later the paralysis returned, and it has persisted for three years to date. Bacteriologic examination of the blood the second year disclosed a pathogenic hemorrhagic pseudo-diphtheria bacillus. This may have been responsible for the apoplectiform neuritis. Reexamination ten months later was negative, and the serum showed no agglutinating power for this bacillus, but guinea-pigs inoculated with it developed hemorrhages in the skin and, in one animal, in the sheath of a nerve. In the course of six years the girl has thus had four attacks of right and three of left radial paralysis, and at present the radial paralysis is bilateral.

**Cinematization of the Arm.**—Scalone's illustrations show the tunnel in the stump, traversing the whole mass of the muscle. The end of the stump can be flexed and extended with the entire force of the muscles. A rod passed through the tunnel can be swung to and fro, each end able to describe an arc of over 90 degrees, and exerting great force as it moves an instrument to and fro or up and down.

**The Rotation Method for Cinematization of the Arm.**—Putti slits the end of the stump for nearly 10 cm., separates the bones, and sutures the skin to make two sausage-like prongs of the end of the stump. Objects can be held between these prongs as between two fingers and, by rotating the arm, an object can be turned with considerable force. These natural prongs have proved particularly useful in one case illustrated in which the man had lost not only both hands, but also his eyesight. With his prong stump he can feed himself, etc., and he has trained the other stump so he can palpate and thus read the raised Braille letters. He is thus saved from the necessity of prosthetic appliances. In this case the prong stump can be rotated for very nearly 165 degrees.

**The Anatomic Artificial Leg.**—Ghillini made the skeleton frame for the leg exactly to correspond to the human skeleton, the wooden femur, tibia and fibula reproducing the natural curves and valgus, with sponge rubber artificial muscles. In the case described, this anatomic leg has given the very best results in functioning and appearance, and Ghillini declares that the prosthetic appliances of the future will certainly be on the basis of anatomy instead of the old system of straight pegs, etc.

## Pediatria, Naples

March, 1920, **28**, No. 5

*Children of Women Doing Gainful Work at Home. C. Carmagnano.—p. 209.
Syringomyelia in Two Children. G. Di Giorgio.—p. 226.
*Encephalomeningocele. A. Versari.—p. 230.

**The Children of Women Doing Wage-Earning or Piece Work at Home.**—Carmagnano's investigations showed more unfavorable conditions for the children of women of this class than for any other industrial workers. He urges that the legal measures to protect prospective and nursing mothers should be applied to this class as well as to factory workers.

**Encephalomeningocele.**—Versari reviews the literature on hernia of the brain and meningocele, and reports the successful removal of an occipital meningocele which contained an extension of brain tissue. The bottle-fed infant was only 5 days old at the time, and it died a few months later, but had never presented any appreciable nervous disturbances.

## Policlinico, Rome

Feb. 16, 1920, **27**, No. 7

*Paraplegia in Malaria. F. Sabatucci.—p. 193.
*Intraspinal Anesthesia. G. Trogu.—p. 198.
*Seasickness. G. Dragotti.—p. 200.

**Paraplegia in Malaria.**—Sabatucci reports two cases in soldiers. After a period of weakness in the limbs, followed by intermittent claudication and rectovesical sphincter incompetency, a spinal cord "stroke" followed, entailing paraplegia and retention of urine and stools, with bed-sores in one case. The paraplegia was lax at first but finally became spastic and gradually improved under quinin. One still has slight spastic paraparesis and the other the same accompanied by sphincter incontinence. The spinal cord *ictus* developed after a long march or other effort.

**General Anesthesia by Intraspinal Route.**—Trogu urges the more general adoption in suitable cases of the Schlimpert-Kehrer method of high sacral anesthesia, and of the intraspinal general anesthesia by Riche's lumbar technic. The latter method is particularly useful for long tedious operations on much debilitated patients. In a recent case the patient required a gallstone operation early in convalescence from typhoid. The 8 per cent. solution of procain was injected by the lumbar route, 1 cg. of the procain to each 5 kg. of body weight, a total of 0.095 gm., withdrawing a total of 10 c.c. of spinal fluid, and mixing it with the anesthetic in the syringe as the injection proceeded. The anesthesia was complete up to the thorax, and the suppurating gallbladder with numerous stones was removed without pain or mishap; a large abscess in the margin of the liver was evacuated at the same time.

**Seasickness.**—Dragotti recalls that all movements of the body liable to sway the lymph in the semicircular canals may induce symptoms like those of seasickness. A cold or hot douche of the ear may not only produce the same symptoms, but may arrest them when they have been brought on by the movement of the ship. Infants escape seasickness as their semicircular canals and the endolymph are not completely developed. Prevention and treatment of seasickness can aim, he says, only to reduce the excitability of the semicircular canal system, as we are unable to prevent the endolymph from being swung about. The bromids therefore, he declares, are the most effectual means in prevention, and strontium bromid irritates the stomach least of the various salts. Small doses are best, 1 gm. three times a day, beginning a week before going on board the ship and keeping it up during the entire voyage. Other sedatives might also be used. The labyrinth in time loses its extreme excitability. The same effect might be realized on land with the revolving chair or other means to train the semicircular canals to bear the swinging of the endolymph without reaction.

## Riforma Medica, Naples

Jan. 31, 1920, **36**, No. 5

*Bacteriology of Epidemic Encephalitis. Maggiora, Mantovani and Tombolato.—p. 114. Boccolari and Panini.—p. 126.
Antigonococcus Vaccine by the Mouth. M. Giorgis.—p. 114.
Epidemic Diseases on Northern Front. U. Carpi.—p. 117.
Walking Case of Epidemic Encephalitis. A. Abbruzzetti.—p. 120.
Prosthetic Appliances for Reconstruction of the Face. B. De Vecchis.—p. 121.
Intraspinal General Anesthesia. I. Di Pace.—p. 125.
Present Status of Intestinal Lambliosis. G. Molinari.—p. 126.

**Bacteriologic Findings in Epidemic Encephalitis.**—Maggiora and his co-workers report that they isolated from the blood in three cases of severe lethargic encephalitis a gram-positive diplococcus which reproduced in guinea-pigs a fatal disease with torpor, paresis and jerking of muscles, and punctiform hemorrhages in the gray matter of the brain. The diplococcus is a facultative anaerobe and passage through animals seemed to enhance its virulence. Boccolari and Panini report the finding of a gram-negative diplococcus in the blood of patients with lethargic encephalitis and from the blood from the heart in one fatal case. Guinea-pigs inoculated with it developed a diffuse diplococcemia.

## Annaes Paulistas de Med. e Cir., S. Paulo

December, 1919, **10**, No. 12

Removal of Large Ranula. Alvaro Camera.—p. 265.
Luargol in Treatment of Inherited Syphilis and Leishmaniasis. Rezende Puech.—p. 268.
Model Death-Certificates. Rezende Puech.—p. 277.

## Archivos Brasileiros de Medicina, Rio de Janeiro

December, 1919, **9**, No. 12

*Cysticercosis of the Brain. J. Santa Cecilia.—p. 881.
Psychanalysis. A. Medeiros E. Albuquerque.—p. 887.

**Cerebral Cysticercosis.**—In the case reported by Santa Cecilia, the patient was a syphilitic man of 20, and the cerebral symptoms were ascribed to a probable gumma, but no benefit was derived from systematic treatment on this basis. He died during a second attack of convulsions, and necropsy disclosed cysticercosis of the brain. There had been no focal symptoms, merely headache and bilateral choked disk

## Brazil-Medico, Rio de Janeiro

Jan. 31, 1920, **34**, No. 5

*Pains in the Stomach. J. Rocha Vaz. Commenced in No. 3, p. 33.
New Species of Sarcophaga. W. Belfort Mattos.—p. 66.

**Pains in the Stomach.**—Rocha Vaz agrees with those who think that the sensations of heat and cold experienced when fluids are ingested do not proceed from the stomach but from the lower end of the esophagus. Even an excess of hydrochloric acid is not directly responsible for pain.

## Crónica Médica, Lima, Peru

December, 1919, **36**, No. 678

Comparison of Influenza Epidemics. E. Odriozola.—p. 403.
*Relapsing Fever in Peru. Eleodoro del Prado.—p. 408.
*Anatomy in Ancient Peru. F. Quesada.—p. 415.
Recent Progress in Gynecologic Instruments. C. E. Roe.—p. 430.

**Relapsing Fever in Peru.**—Del Prado relates that epidemics of mixed typhus and relapsing fever have long been known in Peru, although the two diseases have often been confused. It is a current saying that relapsing fever paves the way for typhus. Not until 1917 was the differential diagnosis of relapsing fever made with precision in Peru and the spirochete discovered, and effectual measures of prophylaxis undertaken against it. Del Prado had charge of the campaign against relapsing fever in the two provinces most ravaged by it in 1918. The disease is endemic in the mountainous districts and appears only sporadically in the coast provinces. Some of the principal endemic foci are in cold regions, on the brow of the mountains. The disease spreads thence to the coast. The hemorrhagic forms have been most prevalent in the epidemics of the last two years.

**Anatomy in Prehistoric Peru.**—Quesada does not agree with those who regard the evidences of trephining found in the tombs of the period of the Incas as testifying to a knowledge of anatomy. The trephining was probably done for some religious rite or purpose and shows no knowledge of anatomy, and neither does the evidence of setting of fractures or embalming of the bodies. But the ancient Indian language has a number of words corresponding to stomach, pharynx, esophagus, liver, gallbladder, bile, pancreas, intestines, peritoneum, heart, etc., but he thinks that they probably were applied only to animals, not to man. At the same time, the numerous portrait heads made of clay showed a knowledge of the superficial anatomy of the face.

## Semana Médica, Buenos Aires

Nov. 27, 1919, **26**, No. 48

Extraperitoneal Cesarean Section and the Indications for It. T. A. Chamorro.—p. 661.
Dental Clinics for School Children. E. Zawels.—p. 694.

Dec. 4, 1919, **26**, No. 49

The Physical Laws of Cardiac Insufficiency. L. J. Facio.—p. 699.
*Water Worm Kills Mosquito Larvae. A. Bianchi Lischetti.—p. 702.
Syphilis Complicating Gonococcus Processes. C. A. Castaño.—p. 704.
Paroxysmal Hemoglobinuria. H. L. Caretti.—p. 706.
Preventorium Dispensary and Consultorium in Prophylaxis of Tuberculosis. J. S. Picado.—p. 710.
*Biologic Reactions in Diagnosis of Tuberculosis. F. Jauregui and N. Lettieri.—p. 714.
Case of Syphilitic Facial Diplegia. N. Ragusin.—p. 718.
Case of Epidemic Meningitis. A. B. D'Atri.—p. 720.
The Hydrocephalus Cry. G. Giacobini.—p. 722.
Sexual Hygiene. L. Mathé.—p. 723.
Vaccine Treatment of Diphtheria. C. E. Pico.—p. 726.

**Worm Enemy of Mosquitoes.**—Bianchi relates that he found that the larvae of mosquitoes disappeared from aquariums and jars when the water contained a certain worm of the planaria genus. In the course of four hours, in one test, six of the planaria specimens devoured a total of 106 larvae, only two extra large ones being left of the 108 that had been placed in the water in small lots during the four hours. The same planaria specimens were then transferred to a jar containing 200 larvae, and in twelve hours no larvae were left alive, the smaller ones having been devoured, and the others eviscerated by the planaria. The author is professor of comparative anatomy and physiology at the University of Buenos Aires.

**Biologic Tests for Tuberculosis.**—The article describes a number of biologic reactions which can be utilized for the diagnosis and prognosis of tuberculosis, according to Maragliano's biologic method. For example: The normal human serum does not contain lecithin. When it is found in the serum the probabilities are in favor of tuberculosis being responsible for this. Tests for nucleins, albumin, precipitins, toxi-albumins, kinetoxins, thermoprecipitins, immune serum and analysis of the urine, applying the Russo, diazo and Weiss-Moritz tests—all these form a basis of data on which can be built an accurate estimate of the case and its outlook.

## Siglo Médico, Madrid

Jan. 17, 1920, **67**, No. 3449

Public Health Questions in Spain. Francos Rodriguez.—p. 35.
*Incontinence of Urine in Children. F. González Aguilar.—p. 37. Concl'n.

**Incontinence of Urine.**—Reviewed on page 988.

Jan. 24, 1920, **67**, No. 3450

Practical Index for Attacks of Hysteria. E. Fernández Sanz.—p. 49.
*Critical Review of Cataract Operations. I. Barraquer y Barraquer.—p. 51. Begun in No. 3449, p. 33.

**Cataract Operations.**—Barraquer explains how his method of vacuum extraction of cataract in the capsule avoids the risks of other technics. He has now a record of over 1,000 operations of the kind and has a set of films showing the technic in moving pictures.

## Deutsches Archiv für klinische Medizin, Leipzig

Jan. 27, 1919, **128**, No. 3-4

*Use of Digitalis. L. Krehl.—p. 165.
*Elimination of Water by the Kidneys. R. Siebeck.—p. 173.
The Participation of the Kidneys in Influenza. Kuczynski.—p. 184.
*The Pathologic Physiology of the Innervation of the Stomach. P. Klee.—p. 204.
*Origin of Gallstones. Aufrecht.—p. 242.
*Ochronosis. O. Gross.—p. 249.

**Technic for Administering Digitalis.**—Krehl remarks that nowadays he scarcely ever meets any case of heart disease of any kind that has not been stuffed with digitalis. It is administered hit or miss, while in his own practice he tries to modify the circulation without giving digitalis unless it is strictly indicated. He has had cases in which the edema subsided without drugs under bed rest alone, even with valvular disease of all kinds, syphilitic myopathies, or cardiac insufficiency from chronic nephritis; it is immaterial whether the pulse is permanently irregular, fast or slow, or whether there are extrasystoles. He never knew strict bed rest fail to benefit when the diet was restricted to 1 or 1.5 liters milk in the twenty-four hours. The amount of milk that can be allowed, the necessity to drop salt, and the length of time these restrictions have to be kept up, gage the severity of the case. And the same individual gage is found in each recurring attack. It is possible, he says, that the Karell cure might prove equally beneficial with rice and fruit, scanty salt and measured water intake being the main principle involved. It has been his experience that the outlook was more favorable the greater the rise in the specific gravity of the urine as diuresis increased. Water may pass off likewise in sweat or be eliminated by the lungs. He urges further study of the factors which modify the insensible perspiration in these cases. If the relief from casting off the excess of water does not restore clinically normal conditions in the circulation, then we have digitalis to fall back on. This seems to increase the amount of blood pumped by the heart per second, besides its influence in improving the strength of the beat. He gives digitalis at once or not according as the patient has been getting digitalis and is suffering much and the circulation is much hampered.

**Elimination of Water by the Kidneys.**—Siebeck reports experiences which show that when a given amount of water is ingested, its elimination within a given period depends on whether much or little water has been ingested during the preceding period. When used to test kidney functioning, the outcome may be misleading unless it is known whether the tissues are already saturated with water or are avid for

water. The "water drinking test" seems to act not only on the kidneys but on the water economy of the body in general.

**Innervation of the Stomach.**—Klee devotes nearly forty pages to his research on the vomiting reflex. He studied it in decerebrated cats by stimulation of the vagus in the neck. The act began always with the persistent closure of the pylorus.

**Origin of Gallstones.**—Aufrecht has sometimes found at necropsies that the bile in the biliary passages contained such numbers of fine blackish concrements that it felt sandy. This and other findings sustain the assumption that with stagnation of bile the pigments in the liver cells may form concrements which may become the nucleus for gallstones.

**Ochronosis.**—Gross states that cartilage placed in homogentisic acid turns brown exactly as in clinical ochronosis. This throws light on alkaptonuric arthritis, as there seems to be something in normal blood which destroys homogentisic acid, while this substance is lacking in the blood with alkaptonuria.

## Deutsche medizinische Wochenschrift, Berlin

Dec. 11, 1919, **45**, No. 50

*Treatment of Eclampsia. R. T. von Jaschke.—p. 1377.
*Diabetes Under War Conditions. A. Magnus-Levy.—p. 1379.
Pathologic Physiology of Human Body Temperature. Mayer.—p. 1382.
Friedmann's Tuberculosis Treatment in Orthopedic Cases. J. Elsner. —p. 1384. To be cont'd.
*Treatment of Lupus. L. Freund.—p. 1386.
Nitrobenzene Poisoning. K. Bohland.—p. 1388.
State Insurance in Relation to Aid to Mothers During Confinement. M. Hodann.—p. 1389.
Emigration of Physicians to Latin America. Mühlens.—p. 1389.

**Combined Treatment of Eclampsia.**—Von Jaschke gives a detailed account of his management of eclampsia cases. He begins his treatment with a subcutaneous injection of 0.015 gm. of morphin hydrochlorid. The sick-room is darkened and the patient is carefully protected against all outside noises. After a fifteen minute interval a superficial ether narcosis is instituted, during which the urine is drawn and a digital examination made to determine the condition of the fetus, followed by venesection. Without the narcosis, exploration or the mere use of the catheter might precipitate a convulsion. The urine should be examined for albumin, and the character of the sediment and quantity of the urine should be carefully noted, as the latter has an important bearing on the prognosis and may affect the therapy. If the child is living, the os fully dilated and the head low in the pelvis the narcosis should be deepened and the child extracted with forceps. The birth should not be forced unless the development of the organs in question and the position of the child permit such a procedure without undue risk. The withdrawal of less than 500 c.c. of blood is useless. More than 500 c.c. should not be drawn until it is seen how much blood is lost at delivery. If eclampsia occurs postpartum, which is rare, venesection can be dispensed with provided the patient has lost a half liter or more of blood during the expulsion of the placenta. After venesection the Stroganoff narcotic chloral treatment is instituted. In severe cases with frequent convulsions it is well to give also, subcutaneously or intravenously, 500 c.c. of Ringer's solution (usually two doses in a twenty-four hour period). Throughout the course of the eclampsia he warns to beware of allowing conditions favoring aspiration pneumonia and biting of the tongue. (The Stroganoff method was described in THE JOURNAL, Feb. 12, 1916, p. 530.)

**Diabetes Under War Conditions.**—Magnus-Levy cites the mortality rate among the civil population of Berlin in support of the now quite generally known fact that diabetes decreased quite perceptibly in Germany during the war period. Before the war, during the 1900-1914 period, there was a gradual increase of mortality from diabetes, the number of deaths, annually, rising from 245 to 444. During the 1915-1918 period, on the other hand, there was an uninterrupted decrease in the annual number of fatal cases down to 202. Before the war, Magnus-Levy had been inclined to ascribe the increase in diabetes of the previous half century to the nerve-racking age of machinery and the rapid pace at which all classes of people lived, as compared with former years. He has been compelled to change his view, for diabetes has decreased in spite of the fact that the war brought with it a vastly greater strain on the nervous system than was known during peace times. He now thinks that the former increase was due mainly to overeating and the more luxurious mode of living.

**Combined Treatment for Lupus.**—Freund describes the method of treating lupus that gives the best results of the many that he has tried during his twenty-three years' experience. He has been using this method routinely for some time. If a given case is adapted to this treatment, that is to say, if the focus of the disease is circumscribed and neighboring mucosae are not invaded, the field of operation is cleansed and iodinized and a local anesthetic is applied. Then, at a distance of 1 cm. from the edge of the diseased tissue, a circular incision, the knife held perpendicular, is made in the healthy tissue just deep enough to cut through the layers of skin. The area thus circumscribed is then dissected off in such a manner as to remove all the diseased tissue in the skin and in the underlying tissue layers. Hemorrhage is controlled by compression, torsion and, if need be, by ligatures. The defect is covered with sterile gauze and bandaged. In a day or two the bandage is removed and the defect exposed to an erythema dose of roentgen rays. The raying is continued daily for seven or eight days, six minutes at a time; the tubes of 4-5 Benoist or Bauer hardness; the secondary current 1 milliampere, and the focal distance from the skin, 20 cm. After the irradiation, fresh petrolatum bandages are applied to the wound, which heals promptly in from eight to twenty-six days, according to the size. Freund has applied this treatment in lupus tumidus et exulcerans of the forehead, the eyelids, the nose, the cheeks, neck, ear, chin, heel, back and buttocks, with areas up to 15 cm. in diameter. With one exception (lupus of the heel) excellent cosmetic results were secured.

## Wiener klinische Wochenschrift, Vienna

Dec. 11, 1919, **32**, No. 50

*Theories in Regard to Death by Scalding. H. Pfeiffer.—p. 1195.
*Microscopic Studies of the Skin. H. Schur.—p. 1201.
Permeability of the Blood Vessels. J. Bauer and Aschner.—p. 1204.
War in Relation to Paresis. E. Herzig.—p. 1207.

**Various Theories in Regard to Death by Scalding.**—After a careful study of the phenomena and symptoms in connection with death by scalding, Pfeiffer rejects the shock theory and reaches the conclusion that scalding is only a special type of a large group of pathologic conditions from the action of heat. Autointoxication of the organism by the waste products of protein metabolism is characteristic of the whole group. Whenever, through the destruction of large quantities of body protein, waste products are formed in large quantities and are retained in the system, thus causing the physiologic defensive system to break down; and, for this or other reasons, the circulation is overloaded with protein degenerative products, the now well known and characteristic picture of protein-waste toxicosis is sure to develop. Pfeiffer thinks that this working hypothesis will explain many hitherto obscure pathologic processes besides those from burns.

**Microscopic Studies of the Skin.**—Schur approves Lombard's method of microscopic study of the skin in the living organism, and suggests some modifications by way of improvement. The technic, as he describes it, is very simple. The portion of the skin to be examined is moistened with a drop of oil or glycerin (Schur prefers liquid petrolatum), whereby it becomes transparent and is thus more readily examined by the naked eye, magnifying glass or microscope. But as the reflex light is often disturbing, Schur recommends that a cover-glass (10 by 10 mm.) be placed over the oiled spot. In this way a picture is obtained that compares favorably with any histologic preparation. Schur follows the custom of making a general survey of the field with the magnifying glass, noting thus quickly the spots that he desires to examine later with the microscope. The light must fall on the object from nearby, at an angle of about 45 degrees. The Osram light is easily attached to the micro-

scope. The difficulties of the examination lie not in the technic, he exclaims, but in the anatomic interpretation of the picture seen, as from lack of experience we scarcely know what we may normally expect to see.

## Zeitschrift für Urologie, Berlin

November, 1919, **13**, No. 11

*Physiology of Ureters and Kidneys. E. Pflaumer.—p. 407.
Bladder Disturbance in Soldiers on Active Service. V. Blum.—p. 449.
Technic for Pyelography. C. Hammesfahr.—p. 452.

**Physiology of Ureters and Kidneys.**—Pflaumer concludes his report of experiments of different kinds on the urinary apparatus of about 100 dogs under cystoscopic control. A number of physiologic features were thus detected which impressed him with their efficiency for the purpose designed, such as the arrest in secretion of urine when there is stasis in the ureter or distention of the bladder. He remarks that the fact that urine spurts synchronously from both ureter mouths suggests a central control. Mechanical stimulation of the ureter mucosa does not affect its contractions or the secretion of urine. With a pressure on the kidney of 60 mm., mercury, the secretion of urine is arrested, but change of position has an immediate effect on production of urine. The erect position reduces it, while raising the pelvis increases it.

His results encourage raising of the pelvis in treatment of oliguria, as it facilitates the outflow from the veins and thus promotes production of urine. Another practical lesson from his data is that the polyuria sometimes observed with retention of urine from hypertrophy of the prostate, etc., is not of reflex origin but is a sign that normal conditions no longer prevail in the kidney, as otherwise the stasis in the bladder would check urine production. The polyuria is thus an early sign of kidney disease and warns to clear away at once the obstruction to the flow of urine.

## Zentralblatt für Chirurgie, Leipzig

Feb. 28, 1920, **47**, No. 9

*Treatment of Harelip. R. Drachter.—p. 194.
*Marking Site for Incision. E. König.—p. 197.
To Reduce Pain with Local Anesthesia. O. Stracker.—p. 199.

**Correction of Harelip Apart from the Median Line.**—Drachter's illustrations show how he cuts a diamond out of the upper lip, the side angles at the junction of the red lip with the skin on each side. The angles left by excision of the diamond must be about 150 or 160 degrees. The raw edges are drawn together and sutured, the lip flaps meeting evenly. He operates under local anesthesia, and waits until the child is several months old, but the operation can be successfully done when the infant is only 6 or 8 weeks old if in good condition otherwise. The child should not be weaned for the purpose. No dressing is necessary after the suture.

**Marking the Site for the Incision Beforehand.**—König mentions among the advantages of the practice that the operator does not have to palpate anew for the guiding points after he has disinfected his hands for the operation. It is also a great help in plastic operations to decide the exact path for the knife. Another advantage is that the changes in the tissues from local anesthesia will not mislead as to the location of the gland or tumor below.

## Zentralblatt für Gynäkologie, Leipzig

March 6, 1920, **44**, No. 10

*Sign of Impending Parturition. Momm.—p. 233.
*Spinal Cord Tumors in the Pregnant. C. Meyer.—p. 238.
*Construction of Artificial Vagina. H. Brossmann.—p. 240.

**Sign of Impending Parturition.**—Momm states that the decrease in weight of pregnant women on the third from the last day of pregnancy, considered along with other data, will often be found a useful means for determining approximately the completion of term. From the two hundred and seventy-first to the two hundred and seventy-eighth day of pregnancy the weight of the patient increases regularly and quite uniformly, the daily increase averaging 56 gm. Beginning with the third day from the last, up till the onset of labor, there is a sharp decline in weight; during the last forty-eight hours the patient loses 690 gm. on an average. He tabulates the weight findings in the last ten days, day by day, in twenty women. In every instance, the sudden drop in the weight was followed by the onset of labor in two or three days.

**Spinal Cord Tumors in the Pregnant.**—Meyer gives a case report of a sarcoma involving the spinal cord, first noticed early in the pregnancy, and emphasizes the necessity for the differential diagnosis as operative removal may ward off danger. Otherwise, spinal cord tumors are liable to be mistaken for myelitis and allowed to progress to a fatal outcome, or they may be classed as pregnancy toxicoses not treated early enough by interruption of the pregnancy.

**Construction of Artificial Vagina.**—Brossmann gives an account of two cases in which he made an artificial vagina. Both operations were successful. In the first case he used the Baldwin method, as it appeared simpler, and because in most of the cases described in the literature the Baldwin method had been used. In the second case he used the Schubert method and found it more satisfactory. With the Baldwin operation, there seemed to be danger of gangrene in the sutured intestinal loop, followed by septic peritonitis, as described by Guggisberg and Pitha. With the Schubert operation, laparotomy was dispensed with, and the whole operation took place outside the peritoneum; furthermore, the newly formed vagina was more spacious. The only danger that he could see in the Schubert method was that if the sigmoid flexure should, in a given case, be too short and the proximal end of the rectum could not be drawn down to the sphincter without undue stretching, gangrene at the end of the rectum might supervene. It might be well to avoid such a contingency by assuring oneself of the condition of the sigmoid flexure in advance by digital examination.

## Zentralblatt für innere Medizin, Leipzig

Feb. 28, 1920, **41**, No. 9

*Present Status of Treatment of Syphilis. W. Hesse, Berlin.—p. 153.

**Treatment of Syphilis.**—Hesse draws the balance sheet for treatment of the different stages of syphilis from thirty-four articles published in German literature, mostly during 1919. He states that mercury has been almost universally abandoned in treatment of general paresis on account of injury therefrom, and he adds that the capricious course of this disease renders difficult any estimate of the effect of treatment.

## Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

Jan. 24, 1920, **1**, No. 4

The Fight Against Venereal Disease. T. M. van Leeuwen.—p. 285.
*Prophylaxis of Diabetes. W. Hoogslag.—p. 295.
*Diphtheria Bacilli Carriers. G. J. Huet.—p. 303.
*The Neck Reflex in Prognosis. D. J. Jonkhoff.—p. 307.
Case of Aplasia of Female Genitals. J. G. de Graaff.—p. 309.

**Prophylaxis of Diabetes.**—Hoogslag relates that during the period when the populace of the Hague was on war rations, 600 diabetics applied for cards entitling them to certain privileges in the rationing. He assumes that this proportion of 600 diabetics in a population of 350,000 probably extends throughout the country. If this is the case, there are 11,000 diabetics among the total 6,500,000 inhabitants of the Netherlands. He calculates further that these 11,000 diabetics average daily 25,000 liters of urine, with an average of 2 per cent. of sugar. This totals 500 kg. of sugar, and, he declares, a loss of this amount of sugar every day cannot be regarded with indifference these days. The loss in earning capacity and the personal sufferings of the diabetics render it imperative to keep them in the most favorable possible condition. Statistics confirm the increasing prevalence of diabetes, and that the moderate cases with only from 0.5 to 1.5 per cent. sugar, are the ones that in the course of years develop the severer complications. In six recent cases of the kind, the men of 52 to 61 had had from 0.3 to 1 per cent. sugar in the urine for six, eight or twelve years, but paid no heed to the doctor's advice about dieting, as they felt well and strong. Two of them died suddenly in a street car or at a picnic; another developed hemiplegia, bed

sores, and furunculosis, and died in coma; another, gangrene and fatal coma; and another developed headache after a strenuous day, and coma proved fatal the next day. Only one of the group had 4 per cent. sugar, but his robust health persisted for four years, when a furuncle developed in the neck after a local trauma and he died in coma in three days. Several in the group held important positions, and if they had dieted to keep their urine free from sugar, they might have had many more years of useful service. The dietetic restrictions might have become less severe in time, as tolerance is increased by keeping the urine free from sugar. He tabulates the details of the diet which cleared the urine of sugar after an average of 5 per cent. or 2.5 per cent. had long been voided in two cases. In conclusion he urges the family physician to have the urine examined once a year of every member of a family in which there is a diabetic, and he appeals to the life insurance companies to provide for examination once a year of the urine of each policy holder without expense to the latter. Thirty patients have been treated with the Allen-Joslin fasting method, with most encouraging results. He commends Joslin's work to Netherlands physicians, saying, "There can be no question of humbug about it," and adding, "American medical science is taking such excellent advantage of the unlimited financial resources at its disposal that it is to be anticipated that ere long it will become of preeminent importance."

**Diphtheria Bacilli Carriers.**—Huet declares that the ground is still unstable under our feet in this matter of healthy carriers. They are more common than generally assumed, and how long they can harbor the bacilli is still a question. Twenty children who had been exposed to diphtheria were inoculated with sheep antitoxin, and only one developed diphtheria, but all but four of the others had the bacilli in throat or nose during the following month and two of the children, for two months. By mistake, two smears were taken from one child the twenty-ninth day; the first proved negative, the second positive. Three diphtheria bacilli carriers were found among twenty-five newly admitted inmates of the institution, a sanatorium for children.

**The Neck Reflex.**—In Jonkhoff's case of status epilepticus the head was twisted to the right and when it was passively turned around to the left, the right arm, which was in extreme extension, became flexed, while the left arm, which had been flexed, straightened out. This neck reflex could be elicited only during the coma. There was also at times a reflex action in the legs and in the eyes from turning the head, but it was inconstant and weak. Necropsy after nine days of coma disclosed extensive hemorrhage in the central convolutions and right ventricle. These neck reflexes were described by Magnus and others, and eight cases have been reported in which they were found in meningitis, hydrocephalus, apoplexy, or idiocy.

Jan. 31, 1920, **1**, No. 5

*To Repress the Spread of Venereal Disease. T. M. van Leeuwen.—p. 365.
*The Physician's Duty in Prophylaxis of Venereal Disease. G. van Rijnberk.—p. 367.
*Large Families and Child Mortality. Floris Hers.—p. 371.
Organization of First-Aid Service in Large Cities. C. J. Mijnlieff.—p. 391.
Case of Rupture of Spleen. J. F. O. Huese.—p. 401.

**Prophylaxis of Venereal Disease.**—Van Leeuwen insists that it is necessary to arrange graduate courses on the diagnosis and treatment of venereal diseases, easily accessible to general practitioners. This is important for the early recognition of these diseases and prevention of infection of others. The necessity for ample facilities for treatment is generally recognized, but the importance of persevering in the treatment as long as it is needed must be emphasized more. By cooperation of the national, state and municipal public health services with the sickness insurance companies and enlightenment of the public much can be accomplished, and efforts in all these lines are now under way in the Netherlands. He reiterates that the burden of repressing the spread of venereal disease rests on the general practitioner, with specialists only as consultants, except in the larger medical centers.

**The Physician's Duty in Prevention of Venereal Disease.**—Van Rijnberk comments on a recent article by van Leeuwen in which, while urging the importance of individual preventive measures, and discussing how they should be applied, he had exclaimed: "But I, for my part, shall never regard it as my duty to hold myself in readiness at every hour of the day or night to disinfect any and everyone that applies for this purpose." Van Rijnberk protests that this view is the result of nonmedical considerations. "One might as well refuse to cauterize the wound from the bite of a dog if one knew that the man had been tormenting the dog. What physician would say, 'I do not regard it as my duty to take any steps to ward off rabies from a man that torments dogs.' Wherever danger lurks that the physician can ward off, and he is called on to ward it off, he should never refuse. But he can protect himself against being routed out at all hours of the night, to apply preventive measures, by raising his fees. Those who expose themselves repeatedly to infection will be deterred from applying to him if he charges much for his services, when demanded at untimely hours. But he should give his services whenever they are demanded. It would certainly impress outsiders very strangely to see the physician later welcome and treat the syphilitic patient when, if it had not been for his refusal to apply the preventive measures, the syphilis would not have developed."

**Large Families and the Death Rate Among the Children.**—Hers records conditions in these lines in a certain district in Holland, giving twenty-one pages of statistics and tables from 1,385 families. They seem to demonstrate that five children is the limit that the mother can bear and rear. The other children in large families die off, from 20 to 50 per cent. dying under the age of 2.

## Norsk Magazin for Lægevidenskaben, Christiania

March, 1920, **81**, No. 3

*Erosions in Stomach Mucosa. K. Nicolaysen.—p. 225.
*Bandl's Ring Impedes Delivery. K. Brandt.—p. 241.
*Case of Acanthosis Nigricans. J. H. Bidenkap.—p. 245.
*Transfusion in Pernicious Anemia. O. Scheel and O. Bang.—p. 250.
Disappointing Results with Convalescents' Serum in Treatment of Influenza Pneumonia. O. Bang.—p. 255.
Growth of Children in Summer. K. Zeiner-Henriksen.—p. 262.
Mammary Cancer: Eighty Cases. S. F. Holst.—p. 272.

**Erosions in Gastric Mucosa from Stimulation of the Vagus.**—Nicolaysen relates that in ten cadavers he found hemorrhagic erosions in the stomach or duodenum or both; in nine, death had occurred from some lesion such as meningitis or chest disease in which the vagus had undoubtedly been irritated. This confirms the results of his research on twenty-five rabbits injected with pilocarpin; they all developed similar erosions in the stomach. Some of the animals displayed marked vagotony, but the erosions healed rapidly. When the rabbits were given sodium bicarbonate to neutralize the hydrochloric acid, no erosion—that is, no loss of substance—developed in the gastric mucosa. Stimulation of the vagus can thus induce these erosions, but whether they are always due to this is another question.

**Bandl's Ring Impedes Delivery.**—Brandt describes his third case in which contraction of the lower limit of the contractile portion of the uterus prevented delivery. Only one of the three children escaped with its life.

**Acanthosis Nigricans.**—There were no papillary growths and the pigmentation subsided after a two months' course in the young man with dementia praecox, otherwise physically sound.

**Blood Transfusion in Pernicious Anemia.**—Scheel and Bang tabulate the daily findings in regard to the blood and urobilinemia after transfusion of 900 c.c. of blood drawn into 120 c.c. of a 2 per cent. solution of sodium citrate. The patient was a man of 33 with pernicious anemia, his third attack. In two weeks the erythrocytes had increased from 850,000 to 3,118,000; the hemoglobin from 19 to 66 per cent.; the bile pigment in the blood serum had dropped from 45 to 7, and the urobilin figure from 875 (4,500 the second day after the infusion) to 42. The improvement progressed for a time, but the man returned about four months later in his fourth attack, the erythrocytes having dropped to 1,382,000 and the hemoglobin to 28.